

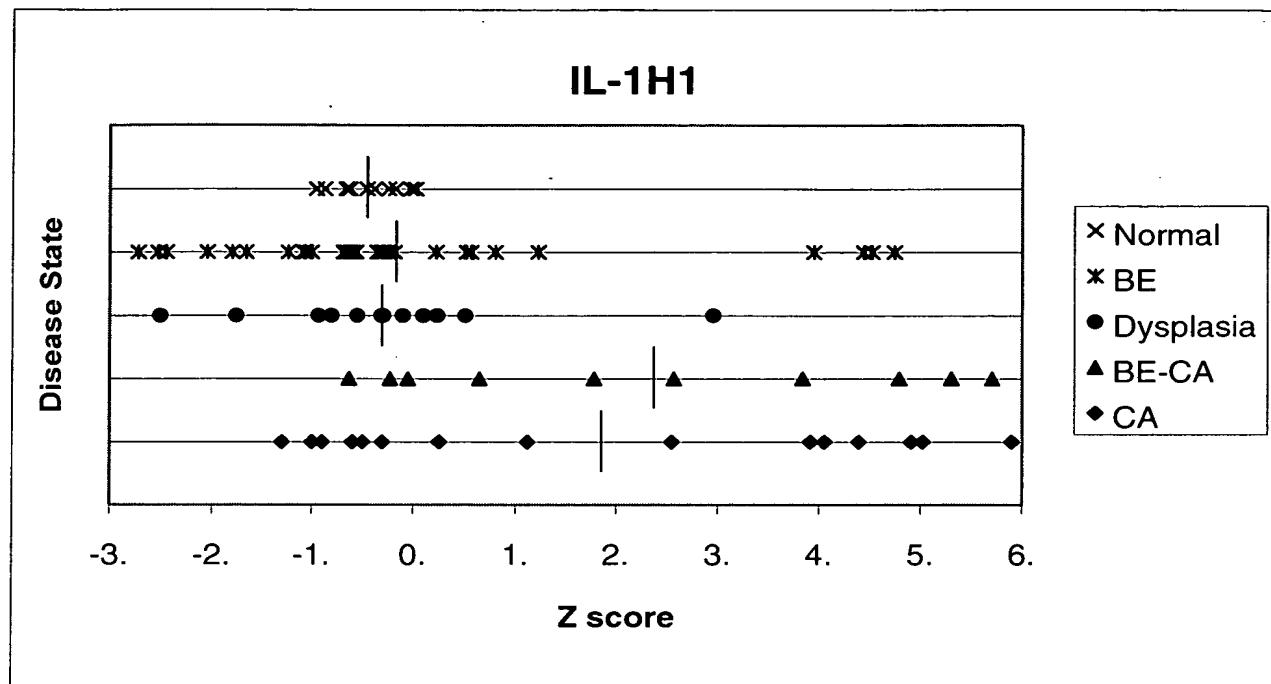
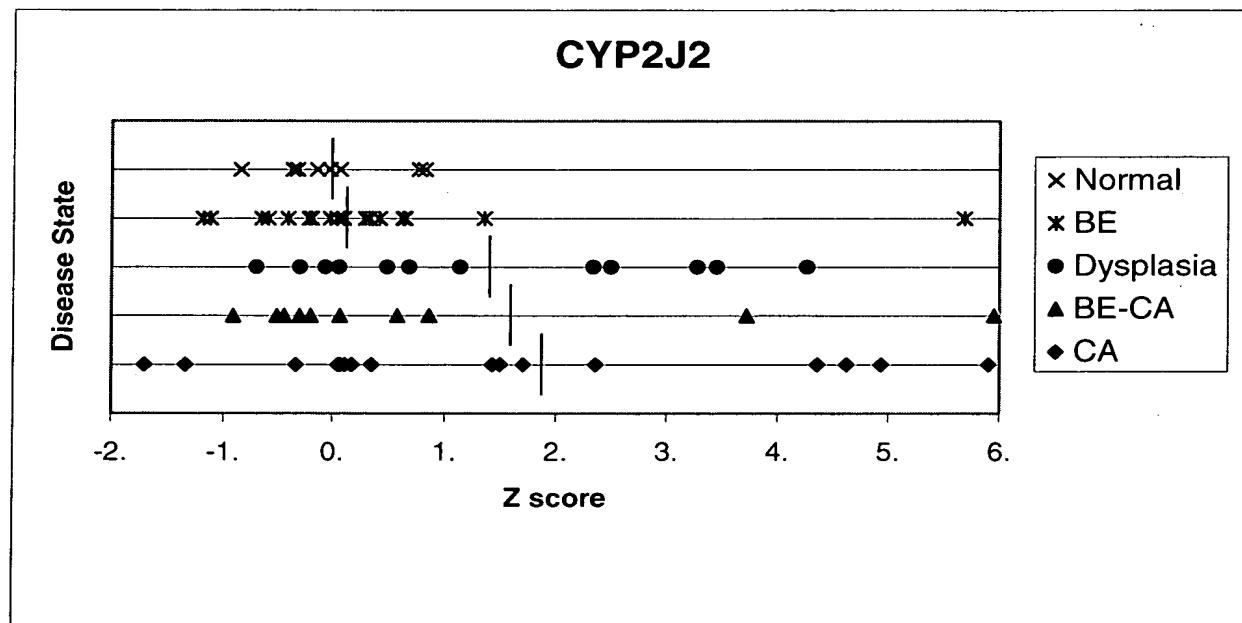
Figure 1A**Figure 1B**

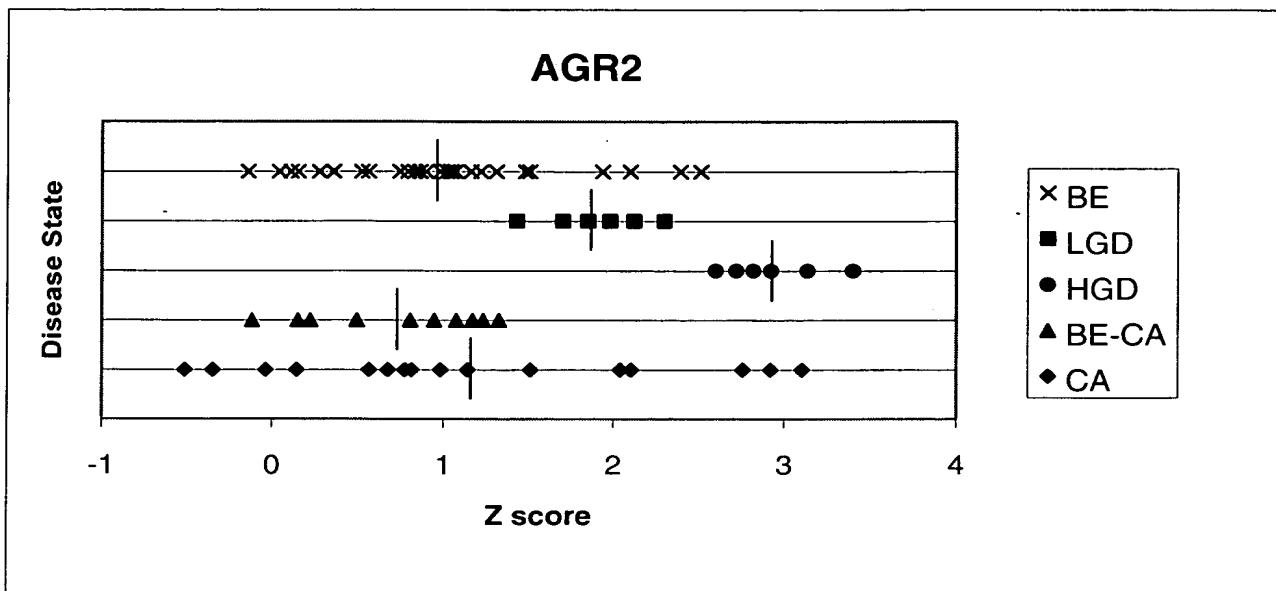
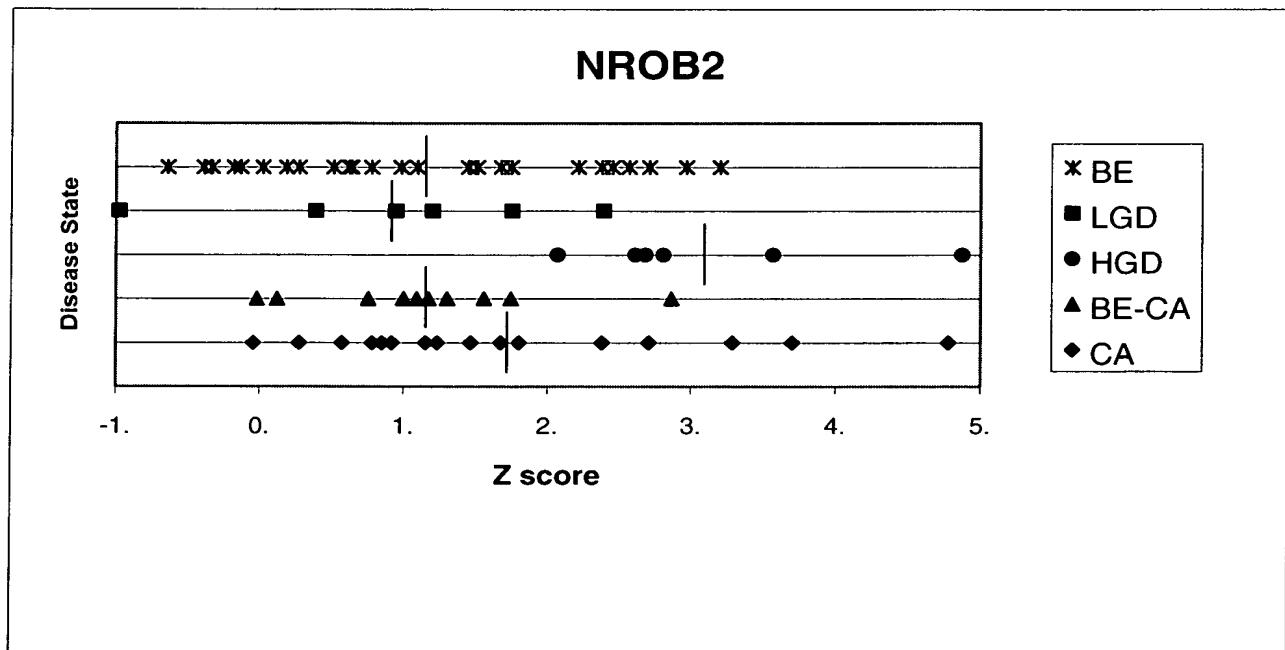
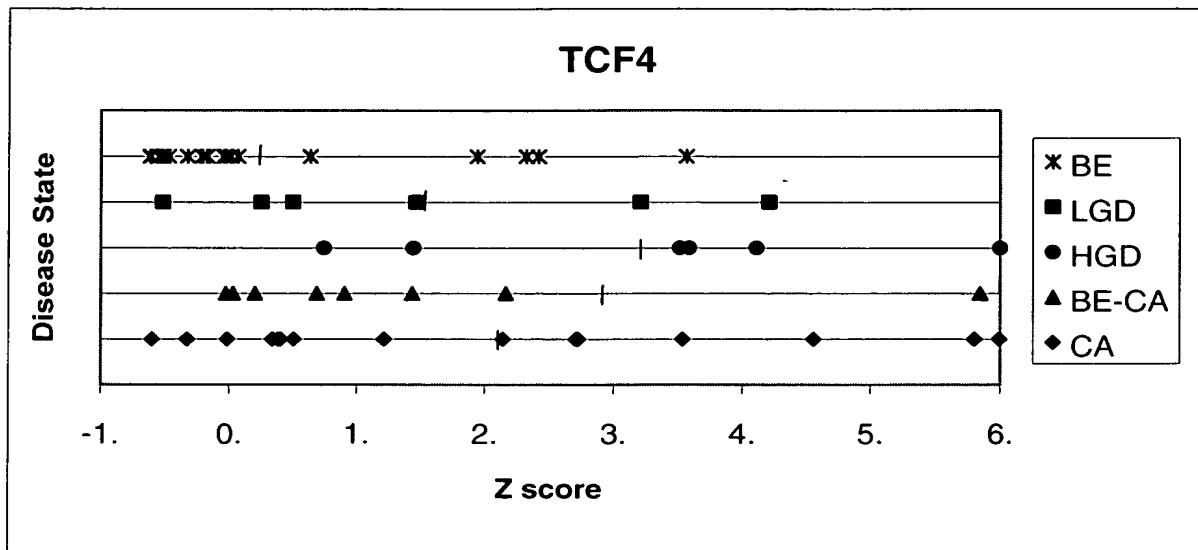
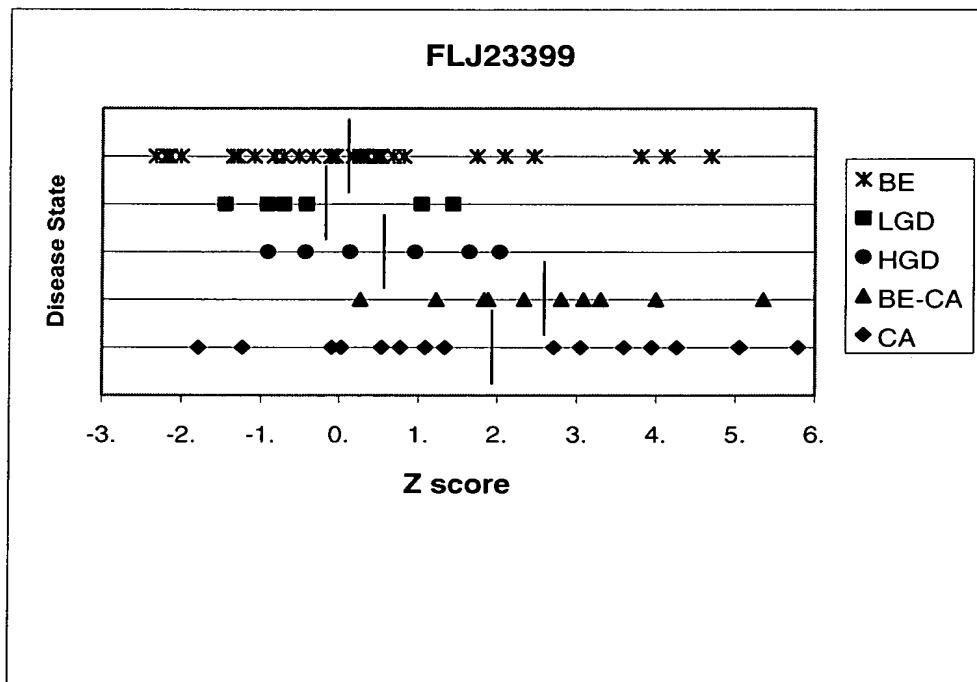
Figure 2A**Figure 2B**

Figure 3A**Figure 3B**

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ET-1 (endothelin-1, NM_001955)

```

1 cgccgcgtgc gcctgcagac gctccgctcg ctgccttctc tcctggcagg cgctgccttt
61 tctcccggtt aaaggcact tggctgaag gatcgctttg agatctgagg aaccgcagc
121 gctttgaggg acctgaagct gttttcttc gtttccctt gggttcagtt tgaacgggag
181 gttttgatc ccttttttc agaatggatt atttgctcat gattttctct ctgtgtttg
241 tggctgcca aggagctcca gaaacagcag tcttaggcgc tgagctcagc ggggtgggtg
301 agaacggcgg ggagaaaaccc actcccagtc caccctggcg gctccgcccgg tccaagcgct
361 gctcctgctc gtccctgatg gataaagagt gtgtctactt ctgccacctg gacatcattt
421 gggtaacac tcccgagcac gttgtccgt atggacttgg aagccctagg tccaagagag
481 ccttgagaa ttacttccc acaaaggca aagaccgtga gaatagatgc caatgtgcta
541 gccaaaaaga caagaagtgc tggaaattttt gccaagcagg aaaagaactc agggctgaag
601 acattatgga gaaagactgg aataatcata agaaaggaaa agactgttcc aagcttggga
661 aaaagtgtat ttatcagcag ttagtgagag gaagaaaaat cagaagaagt tcagaggaac
721 acctaagaca aaccaggctcg gagaccatga gaaacagcgt caaatcatct tttcatgatc
781 ccaagctgaa aggcaatccc tccagagagc gttatgtgac ccacaaccga gcacattgg
841 gacagacctt cggggcctgt ctgaagccat agcctccacg gagagccctg tggccactc
901 tgcactctcc accctggctg ggatcagagc aggagcatcc tctgctgggt cctgactggc
961 aaaggaccag cgtccctcgaa caaaacattc caagaaaggt taaggagttc ccccaaccat
1021 cttcactggc ttccatca ggttaactgct ttggctctt cttcatctg gggatgacaa
1081 tggacctctc agcagaaaaca cacagtacaa ttcaattcg ggtggcatcc tccggagaga
1141 gagagaggaa ggagattcca cacaggggtg gagttctga cgaaggctc aaggaggtgt
1201 ttgtgtctga ctcaggcgcc tggcacattt cagggagaaa ctccaaagtc cacacaaaga
1261 ttttctaagg aatgcacaaa ttgaaaacac actcaaaaga caaacatgca agtaaagaaa
1321 aaaaaaaaaa aaaa (SEQ ID NO:1)

```

FIGURE 4A

ET-1 (endothelin-1, NM_001955)

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MDYLLMIFSLLFVACQGAPETAVLGAELSAVGENGGEKPTPSPP
RLRRSKRCSCSSLMDKECVYFCHLDIIWVNTPHEVVYPGLGSPRSKR
TDRENRCQCASQDKKCNFCQAGKELRAEDIMEKDWNHHKGKDCSKLGK
VRGRKIRRSSEEHLRQTRSETMRNSVKSSFHDPLKGPNPSRERYVTHN
RAHW (SEQ ID NO:2)

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FIGURE 4B

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AGR2 (anterior gradient 2 (Xenopus laevis) homolog, NM_006408)

```

1 ccgcattcata gccggccact cacacaaggc aggtgggtga gggaaatccag agttgccatg
61 gagaaaaattc cagtgtcagc attcttgctc ctgtggccc ttcctacac tctggccaga
121 gataccacag tcaaaccctgg agccaaaaag gacacaaagg actctcgacc caaactgcc
181 cagaccctct ccagagggtg gggtgcacca ctcattcttgc ctcagacata tgaagaagct
241 ctatataaat ccaagacaag caacaaaccc ttgatgatta ttcatcactt ggatgagtgc
301 ccacacagtc aagctttaaa gaaagtgtt gctgaaaata aagaaatcca gaaattggca
361 gagcagtttgc tcctcctcaa tctggtttat gaaacaactg acaaaccacct ttctcctgat
421 gggcagttatg tccccaggat tatgtttgtt gaccatctc tgacagtttag agccgatata
481 actggaaatg attcaaatcg tctctatgtc tacgaacctg cagatacagc tctgttgctt
541 gacaacatga agaaagctc caagttgctg aagactgaat tgaaagaaa aaaaatctcc
601 aagcccttcgtctgtcagg ctttgcactt gtaaaaccaga agaagtgtga gaagactggc
661 tagtgtggaa gcatagtgaa cacactgatt aggttatgg ttaatgttac aacaactatt
721 ttttaagaaa aacaagttt agaaatttgg tttcaagtgt acatgtgtga aaacaatatt
781 gtataactacc atagtggcc atgattttct aaaaaaaaaa ataaatgtt tgggggtgtt
841 ctgtttctc caacttggc ttacagtg gttcgtttac caaataggat taaacacaca
901 caaaatgctc aaggaaggga caagacaaaa cccaaacttag ttcaatgtat gaagacccaa
961 gaccaagtttcaatctcacc acaccacagg ttctcacttagt atgactgtaa gtagacacgaa
1021 gcttaatcaa cagaagtatac aagccatgtg ctttagcata aaagaatatt tagaaaaaca
1081 tccccaaatccaaatcaca taccttagatg caactctggc caggaactct aaggtacaca
1141 ctttcattta gtaattaaat ttttagtcaga ttttgcctaa cctaattgtc tcagggaaag
1201 cctctggcaa gtagctttct ctttcagagg tctaattttag tagaaagggtc atccaaagaa
1261 catctgcact cctgaacaca ccctgaagaa atccctggaa ttgaccttgc aatcgatttg
1321 tctgtcaagg tcctaaagta ctggagtggaa ataaatttgc ccaacatgtg actaatttgg
1381 agaagagcaa agggtggta cgtgttgatg aggcagatgg agatcagagg ttacttaggt
1441 ttagggaaacg tggaaaggctg tggcatcagg gtagggggc attctgcata acagaaattt
1501 gaattgtgtg ttaatgtt cactctatac ttaatctcac attcattaaat atatggaaattt
1561 cctctactgc ccagccccctc ctgatttctt tggccctgg actatgggtc tgtatataat
1621 gctttgcagt atctgttgct tgcgttgcattt aacttttttgcataaaacct tttttgaaca
1681 gaaaaaaaaa aaaaaaaaaa a (SEQ ID NO:3)

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FIGURE 5A

AGR2 (anterior gradient 2 (Xenopus laevis) homolog, NM_006408)

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MEKIPVSAFLLLVALSYTLARDTTVKPGAKKDCKDSRPKLPQTL
SRGWGDQLIWTQTYEEALYKSKTSNPKLMIIHHLDECPSQALKVFAENKEIQKLAE
QFVLLNLVYETTDKHLSPDGQYVPRIMFVDPSLTVRADITGRYSNRLYAYEPADTALL
LDNMKKALKLLKTEL (SEQ ID NO:4)

```

FIGURE 5B

ADAM8 (NM_001109)

1 gaccggccca tgcgccccct cgggctctgg ctgctggcg cgatgtatgc gcctgcgatt
61 gccccccagcc gcccctgggc cctcatggag cagtatgagg tcgtttgcc gcggcgtctg
121 ccaggcccccc gagtcggccg agctctgccc tcccacttgg gcctgcaccc agagagggtg
181 agctacgtcc ttggggccac agggcacaac ttacccctcc acctgcggaa gaacaggac
241 ctgctgggtt ccggctacac agagacctat acggctgcca atggctccga ggtgacggag
301 cagcctcgcg ggcaggacca ctgcttatac cagggccacg tagagggta cccggactca
361 gccgccagcc tcagcacctg tgccggcctc aggggttct tccaggtggg gtcagacctg
421 cacctgatcg agccctgga tgaagggtgc gaggggcgac ggcacccgt gtaccaggct
481 gagcacctgc tgcagacggc cgggacctgc ggggtcagcg acgacagct gggcagcc
541 ctgggacccc ggacggcagc cgttccagg cctcgccccg gggactctct gccatcccga
601 gagaccgcgt acgtggagct gtatgtggc gtggacaatg cagagttcca gatgctgggg
661 agcgaagcag ccgtgcgtca tcgggtgctg gaggtggtga atcacgtgga caagctatat
721 cagaaactca acttccgtgt ggtcctggg ggcctggaga ttggaaatag tcaggacagg
781 ttccacgtca gccccgaccc cagtgtcaca ctggagaacc tcctgacctg gcaggcaccc
841 caacggacac ggcggcacct gcatgacaac gtacagctca tcacgggtg cgaacttcacc
901 gggactactg tggggttgc cagggtgtcc gcatgtgct cccacagctc aggggctgtg
961 aaccaggacc acagaagaa cccctggg gttggctgca ccatggccca tgagatgggc
1021 cacaacctgg gcatggacca ttagtggaaac gtccagggt ggcgtgcca gaaacgcttc
1081 gaggccggcc gctgcatcat ggcaggcagc attggctcca gtttccccag gatgttcagt
1141 gactgcagcc aggcttaccc ggagagctt ttggagcggc cgcagtccgt gtgcctcgcc
1201 aacgccccctg acctcagcca cctgggtggc gggcccgtgt gtggaaacct gtttgtggag
1261 cgtggggagc agtgcgactg cggccccccc gaggactgccc ggaaccgctg ctgcaactct
1321 accacctgcc agtggctga gggggccca g tggcgcacag gtacctgtc ccaggagtgc
1381 aaggtgaagc cggctggta gctgtggcgt cccaaagaagg acatgtgtga cctcgaggag
1441 ttctgtgacg gcccgcaccc ttagtggcc gaaagacgc tccagagaa cggcacgc
1501 tgcctccggg gctactgcta caacggggcc tggcccacac tggccagca gtgcccaggcc
1561 ttctgggggc caggtgggca ggctgcccggag gatcctgtc tctccatga catcctacca
1621 ggctgcacagg ccagggcgta cagggctgac atgtgtggc ttctgcagt caagggtggg
1681 cagcagccccc tggggcgtgc catctgcata gttggatgtgt gcccacgc taccacagag
1741 gatggcactg cgtatgaacc agtggcccgag ggcacccggg gttggaccaga gaagggttgc
1801 tggaaaggac gttgccagga cttacacgt tacagatcca gcaactgctc tgcccagtg
1861 cacaaccatg ggggtgtcaa ccacaaggag gatgtccact gccacgcggg ctggggcccg
1921 ccccaactgct cgaagctgct gactgagggt cagcgcacgt cggggagct cccctgc
1981 gtgggtgtgg ttctgggtgt cctggcaggt gtgtgtgtca ccctggcagg catcatgtc
2041 taccgcaaaag cccggagccg catcctgagc aggaacgtgg cttccaaagac cacaatgggg
2101 cgctccaaacc ccctgttcca ccaggctgcc agccgcgtgc cggccaaaggg cggggctcca
2161 gccccatcca gggggccccc agagctgtc cccaccaccc acccgggcca gccccccca
2221 caccggccct ctcgggtggc tctgaagagg cggccccctg ctcctccggt cactgtgtcc
2281 agcccaccc tcccaagtcc tgtctacacc cggcaggcac caaaggaggt catcaagcca
2341 acgttcgcac ccccaagtgcc cccagtcaaa cccggggctg gtgcggccaa ccctggtcca
2401 gctgaggggtg ctgttggccc aaagggttgc ctgaagccccc ccatccagag gaagcaagga
2461 gccggagctc ccacagcacc ttagggggc acctgcgcct gtgtggaaat ttggagaagt
2521 tgcggcagag aagccatgct ttccagcctt ccacggtcca gctagtgcgc ctcagcccta
2581 gaccctgact ttgcaggctc agtgcgtt ctaacctcag taatgcacatc acctgagagg
2641 ctccctgtgt ccacgcctc agccaattcc ttctcccgcc tggccacag tgtagccca
2701 gctgtctgca ggcaccaggc tggatgagc tggcgtctt cgggtgcgt tggtgtacg
2761 tgtctccagg tggccgtgg tctcccgctg tggcgttggag gccacatata cagccctcc
2821 cagccacacc tgccctgtc tggggcctg ctgagccggc tgccctggc accccggttcc
2881 aggcagcaca gacgtggggc atccccagaa agactccatc ccaggaccag gttccctcc
2941 gtgctttcg agaggggtgc agtgagcaga ctgcacccca agtcccac tccaggtccc
3001 ctgatcttgg gctgtttcc catgggattc aagagggaca gccccagctt tggtgtgtt
3061 taagcttagg aatgccctt atggaaaggg ctatgtggga gagtcagcta tcttgc
3121 ttttctttagg acctcagatg tggcgttccagc agggctgaaa gctttattc ttaataatg
3181 agaaatgtat atttactaa taaaatttgc accgagttct gtagattttt gttaga (SEQ

ID NO:5)

FIGURE 6A

ADAM8 (NM_001109)

MRGLGLWLLGAMMLPAIAPSRPWALMEQYEVVLPRRLPGPRVR
ALPSHLGLHPERVSYVLGATGHNFTLHLRKNRDLLGSGYTETYTAANGSEVTEQPRGQ
DHCLYQGHVEGYPDSAASLSTCAGLRGFFQVGSDLHLIEPLDEGGEGGRHAVYQAEHL
LQTAGTCGVSDDSLGSLLGPRTAAVFRPRPGDSLPSRETRYVELYVVVDNAEFQMLGS
EAAVRHRVLEVNVHVDKLYQKLNFRVVLVGLEIWNSQDRFHVSPPSVTLENLLTWQA
RQRTRRHLHDNVQLITGVDFGTGTVGFARVSAMCSHSSGAVNQDHSKNPVGVACTMAH
EMGHNLGMDHDENVQGCRCQERFEAGRCIMAGSIGSSFPRMFSDCSQAYLESFLERPQ
SVCLANAPDLSHLVGGPVCGNLFVERGEQCDCGPPEDCRNRCCNSTTCQLAEGAQCAH
GTCCQECKVKPAGELCRPKKDMCDLEFCGRHPECPEADAFQENGTPCSGGCYNGAC
PTLAQQCQAFWGPQQAAEESCFSYDILPGCKASRYRADMCGVLQCKGGQQPLGRAIC
IVDVCHALTTEDGTAYEPVPEGTRCGPEKVCWKGRQDLHVYRSSNCSAQCHNHGVCN
HKQECHCHAGWAPPHCALKLTERVAASGLPVLVVVLVLLAVVLVTLAGIIIVYRKAR
SRILSRNVAPKTTMGRSNPLFHQAASRVPAKGAPAPSRGQPQELVPTTHPGQPARHPA
SSVALKRPPPAPPVTVSSPPFPVPVYTRQAPKQVIKPTFAPPVPPVPGAGAANPGPA
EGAVGPKVALKPPIQRKQGAGAPTAP (SEQ ID NO:6)

FIGURE 6B

PRSS8 (Prostasin precursor, serine protease, NM_002773)

```

1 gactttggtg gcaagaggag ctggcggagc ccagccagtg ggccggggcca ggggaggggc
61 gggcaggtag gtgcagccac tcctggagg accctgcgtg gccagacggt gctgggtact
121 cgtccacact gtcgcttcg gatactccag gcgtctcccg ttgcggccgc tccctgcctt
181 agagggcagc cttggacaact tgctgcccct ttccagcccg gattctggga tccttcctc
241 tgagccaaca tctgggtcct gccttcgaca ccacccaaag gcttcctacc ttgcgtgcct
301 ggagtcgtgcc ccaggggccc ttgtctggg ccatggccca gaagggggtc ctggggcctg
361 ggcagctggg ggctgtggcc attctgtct atcttgatt actccggctcg gggacaggag
421 cggaaaggggc agaagctccc tgcgggtgtgg ccccccaga acgcatacaca ggtggcagca
481 gtgcagtcgc cggtcagtgg ccctggcagg tcagcatcac ctatgaaggg gtccatgtgt
541 gtggggctc tctcgtgtct gagcagtggg tgctgtcagc tgctcactgc ttccccagcg
601 agcaccacaa ggaaggcctat gaggtcaagc tggggggcca ccagctagac tcctactccg
661 aggacccaa ggtcagcacc ctgaaggaca tcatccccca ccccagctac ctccaggagg
721 gtcggccat ctcggccat ctcggccat ctcggccat tcagcagacc catcacccctc tcccggctaca
781 tccggccat ctggccat ctcggccat ctcggccat ctcggccat ctcggccat ctcggccat
841 tcactggctg gggtcattgtg gccccctc taggccttc gacgcccggccat ctcggccat
901 aactcgaggt gcctctgatc agtcgtgaga cgtgttaactg cctgtacaac atcgacgcca
961 agcctgagga gcccggactt gtccaaagagg acatgggtgtg tgcggctat gtggaggggg
1021 gcaaggacgc ctggccaggg gactctgggg gcccacttc ctggccctgtg gagggtctct
1081 ggtacctgac gggcattgtg agctggggag atgcctgtgg gggccggccat aggccctggg
1141 tgtacactct ggcctccagc tatgccttcg gatccaaag caaggtgaca gaactccagc
1201 ctcgtgtggt gccccaaacc caggagtcgg agcccgacag caacctctgt ggcagccacc
1261 tggccttcag ctctggccat gcccagggtc tgctgaggcc catccttttc ctgcctctgg
1321 ggcctggcttc gggccttc tcccatggc tcagcgagca ctgagctggc cctacttcca
1381 ggcctggatgc atcacactca aggacaggag cctggccctt ccctgtatggc ctttggacc
1441 agggcctgac ttgagccact ctttcctca ggactctgcg ggaggctggg gcccacatctt
1501 gatcttgag cccattcttc tgggtgtgtc ttttgggacc atactgaga gtcaggaggt
1561 ttactgcctg tagcaatggc cagagccttc ggccttcac ccacccatggc ccagccca
1621 ggcctggatgc ctggggagct cctgggaccc ttggctatga aaatgagccc tggctccac
1681 ctgtttctgg aagactgctc cggccggcc tggccagact gatgagcaca tctctctgg
1741 ctctccctgt gttctgggtc gggggccaccc ttgtgcagct tcgaggacag gaaaggcccc
1801 aatcttgccc actggccgct gagegcccc ggccttgac tccctggactc cggaggactg
1861 agcccccacc ggaactgggc tggcgttgg atctgggtg ggagtaacag ggcagaaaatg
1921 attaaaaatgt ttgagcac (SEQ ID NO:7)

```

Figure 7A

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PRSS8 (Prostasin precursor, serine protease, NM_002773)

MAQKGVLGPGQLGAVAILLYLGLLRSGTGAEGAEAPCGVAPQAR
ITGGSSAVAGQWPWQVSITYEGVHVGCGSLVSEQWVLSAAHCFPSEHHKEAYEVKLGA
QLDSYSEDAKVSTLKDIIIPHPSYLQEGLQEGSQGDIALLQLSRPITFSRYIRPICLPAANA
SFPNGLHCTVTGWHVAPSVSLLTPKPLQQLEVPLISRETCNCLYNIDAKPEEPHFVQ
EDMVCAGYVEGGKDACQGDGGPLSCPVEGLWYLTGIVSWGDACGARNRPGVYTLASS
YASWIQSKVTELQPRVVPQTQESQPDSENLCGSHLAFSSAPAQGLLRPILFLPLGLALG
LLSPWLSEH (SEQ ID NO:8)

Figure 7B

AXO1 (Axonin-1 precursor, NM_005076)

```

1 acacacacgc gccctcaccc gccaccgccc ccgcggccgc cgccgcaccc ggacagcgag
61 cggctgaggc cgccagggcc caaaggacag cggcccagac aggggctggc ggccccggccg
121 gccccggctc accgactcgg gcagcatcca cctgccccag ccaacacccct tctctcgccc
181 caggtcctt ctcagcctcc agctggctg tccccaaagct gagctgaggc tcttcctc
241 cgatccccac ctctgccccg acatccacca tggggacagc caccaggagg aagccacacc
301 tgctgctgg agctgctgtg gcccttgtct cctttcagc ttggagttca gccctggat
361 cccaaaccac cttegggctt gtcttgaag accagccct cagtgtgcta ttcccagagg
421 agtccacgga ggagcagggtg ttgctggcat gccgcggccg gcccagccct ccagccaccc
481 atcggtggaa gatgaatggt accgagatga agctggagcc agttcccgt caccagctgg
541 tggggggcaa cctggtcatac atgaacccca ccaaggcaca gnatgccgg gtctaccagt
601 gcctggcctc caaaccagtg ggcacccgtt tcagcaggga gcccatectc cgcttcggct
661 ttctgcagga attctccaag gaggagcgg acccagtgaa agtctatgaa ggctgggggg
721 ttagtggcc ctgtaaaccct cctgcccact acccaggctt gtcttaccgc tggctctca
781 acgagttccc caacttcatac ccgacggacg ggcgtactt cgtgtccca accacaggga
841 acctgtacat tgcccgaaacc aatgectcag acctggcaa ctactctgt ttggccacca
901 gccacatgga cttctccacc aagagegtct tcagcaagtt tgctcagctc aacctggctg
961 ctgaagatac cccggtctttt gcacccagca tcaaggcccg gtcccagca gagacctatg
1021 cactggtggg gcagcaggc accctggagt gcttcgctt tggaaccct gtccccggaa
1081 tcaagtggcg caaagtggac ggctccctgt ccccgcaatg gaccacagct gagccacacc
1141 tgcagatccc cagcgtcagc tttgaggatg agggcaccta cgagtgttag gcccggaaact
1201 ccaaggggccg agacaccgtg cagggccgca tcattcgatc ggttcacccctt ggtggctaa
1261 aagtgtatcgc gacacacagag gctgacattt gcttcacccctt gcttggggc tggcagccg
1321 cccggcaagcc cccggttacaa gtggcgttgc tgccgaacgg ggagccctcg gctcccaaga
1381 accgggttggc ggtgtggct gggacctgc gtttctccaa gctgagccctg gaagactcg
1441 gcatgtacca gtgtgtggca gagaataagc acgttacccat ctacgcccgg gccgagctag
1501 cccgtcaagc actcgccctt gacttcaggc tgaatccctt gaggcgtctg atccccgggg
1561 cccgggggg agagatccctt atccccgttcc agccccggcc agtccaaag gccgtgggtgc
1621 tctggagcaa aggacacggag attttgtca acagcagcag agtactgtta actccagatg
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1741 agaacttcatac gggcaaaagcc aacagcactg gaatcccttcatc tggcggat gcaacaaaa
1801 tcactcttagc cccctcaatg gccgacatca acttgggtga caacctgacc ctacagtggcc
1861 atgcctccca cggcccccacc atggacatca ctttcacccctg gaccctggac gactttccca
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1981 atctgaccat cctgaacggcc cagtcgttgc atggggggaa gtacacgtgc atggcccaga
2041 cgggtggc gggcgttgc aaggaggccca cagtccttgc cccgggttccg ccaggcccc
2101 caggaggtgt ggtgtggagg gacattggcg acaccatccat ccagtcgttgc tggagccgtg
2161 gcttcgaccaa ccacagccctt atcgctaaatg acaccctgc acgttcgtact ccacccgtc
2221 ggaagtggaa gcagggttgc accaatcttgc caaacatgc gggcaatgc gagactgcac
2281 aggtgtggg cctcacccccc tggatggact atgagttccg ggtcatagcc agcaacatcc
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2461 ggacggcccat gtcacggggag taccagaacg gagacggctt cggctacccctg ctgtcttcc
2521 gcaggcaggc cagcaactcac tggcagaccc cccgggttgc tggcggccat gcccagtaact
2581 ttgtctacag caacggagac gtcggccctt acacccctt tgaggtaatc atcccgagct
2641 acaaccggccg cggggatggg cccggagagcc tcactgtcaact cgtgtactca gctgagggaa
2701 agcccaagggtt gggcccttacc aagggtgtggg cccaaagggtt ctcatccatc gagatgaacg
2761 tgacctggaa acccggtcag caggacatga atggatccctt cctggggat gagatccgct
2821 actggaaagc tggggacaaa gaagcagctg cggaccggactt gaggacagca gggctggaca
2881 ccagtggcccg agtcagcggc ctgcataccca acaccaagta ccatgtgacc gtgagggccct
2941 acaaccggccg tggcaactggg cctggccagcc cttctgccttca cggccacgacc atgaagcccc
3001 ctccgcggcg accttcctggc aacatcttcc gactttctc aagctcttagt ctttagcattt
3061 agtgggaccc tggatccctt tccgaaatg agtctgtcaactt caccggctat aagatgtgt

```

FIGURE 8A

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3121 accagaatga cttacacacccg actccccacgc tcacacccac cgccaagaac tggatagaaa
3181 tcccagtgcc tgaagacatt ggccatgccc tggataaaat tcggaccaca gggcccgag
3241 gggatggat ccctgcagaa gtccacatcg tgaggatgg aggcacaagc atgatggtg
3301 agaacatggc agtccgcccc gcaccacacc ctggcacccgt cattttccac tccgtggca
3361 tgctgatcct cataggctcc ctggagctct gatcctggaa cccctccctc tgccgcac
3421 ctggacgcca cctccgacgg acacagccag ccccttcctg ctgccaagggt ggcctgac
3481 tgtgccagag agtggctgg ttaaatacc tactttaaac agtcccctt ttgttaggagg
3541 taggatattt tatattctgc cgaggatag aacccacgca aggattttct taaaatttag
3601 aggcaccagg cagtaacttc catgatgaca ctgacgccta tacctgagct ctaggctgcc
3661 tggagggaaag gaacaggccc atgggaagaa gggggtttta aaaacatgtc ttcaactcag
3721 cagagatggc cctctggac cctatacggc cttccgcact tgagagcgt cctaggcccg
3781 gcaggaacac cagacatgaa caggttgaag aactggagcg aagtgcacac ctaccatcc
3841 ttcagtctaa ggaagaagggg caagccctgg gaccaagagc tctccgcct tctccctcga
3901 gcagcagcaa ggaccctgac gctgtccccg ataactccct aggggctcct gcctgcccaa
3961 gcccgtgaga accagcgcacc cgatgcctga ggctgggagc ctgagccctt tcaagtttga
4021 ggggggtgt actccaggct gtttgggtg ggagccaaaa agagttgaga gcccaggccc
4081 cttggtgaaagg aggccacca gccttgcctc gagatgtca caaccagggt gacgatgccc
4141 tctcagccaa cactgccaac ctgaccctgt catcccgatt gacagcgcaca cttcaggctgg
4201 ctgggtgact aaagggttgg tcttgggtgg gtcctccacc cttccaaagac ccattctgca
4261 cagtccctcc agggtttggg caggagatgg ccaatcatgc gcccacccctc ccagtgcctc
4321 ctgcagtca gtcggccctcc cccgacctgca gccccagact ctgctctccc agcaactgact
4381 cactcctgcc tggagggggaa atgcagcatt catgctgtgt gtcctggat tgggagggtt
4441 ctgggaaggg cagaggataa atgtggccct gctgtccccc aggtataacct aggaccac
4501 ggcacagatcc gtcctccagac ggccttggac tgcttgcatt tccccggaga aaaaggggtt
4561 aataaatggg ccatcccttc ctgagctctg ggtataactac cagtacacaga acgtcagagc
4621 tggagaagaac cttagagctc aacttctca agccctcacc ttacagatg agaaatgg
4681 ggttgtccag agagggtctg ggattccaa ggtcacacag cccagaagag atggggctgg
4741 gttaagaact cgagtctcc acctttctgt tcaaggctgt ttgtctaccc agaggaagga
4801 ggcactgctg aatggctatg gcctggctaa gaaggtgatt agtcagtagg gtgtgaaaat
4861 tctacttcaa ggggttcgga ttggatgtca tggggattgg catggctggg tccccgtcca
4921 aggtgtggc agagcttcta ccaaacttca acatggaggg ctgacttcaa gtcctctgtc
4981 cccctcactc ttgcccccaag aaaagaggcc aaagcaagag cagattccct aggcaagagc
5041 agcagcaca ctagaaacc ccaaagccca tgctccgaca ggtggccctt cacagggggc
5101 agcgggacag gcatcttgc gggcatatgt cctcggaaagc tccgacccctg ttttctgttag
5161 ttatagtttta gacttctatt ttgttatgtt tttttaaact ttaagtctt gctctat
5221 cctggcagg tttatgttgc tgatccat tttttttttt aagctcacat
5281 gcctttccc tgccacagcc aaaccccccac tgacccctac ccaccaccc ctggccagg
5341 tcagcttcc tggagctggc taatgaaagc ctccctcacct cttcccaacc cttacaagca
5401 aggggtctag gggctcagct atacgaccat tctccctgac agggagtcca aacttggcct
5461 agcatccctc ctggcccccc tctggccacg acttggcctg tgcctggttc tctatcagaa
5521 aggggatgtc gaacaaaacc tccttccaag ttttatccaa ttcgttcctc attgcctcgg
5581 gctgcgtcag gggaaagcagg ggacagggtgt ccagttgctg ggccgaggga ggagctggtt
5641 tggcatagga cctaaccaggta agagcttagag gctacagcca ctaaacttgc ttcaaggccaa
5701 cgatagttac tcacaagtaa gtacccat tccactaaaa aggggagggaa
5761 ggcagacctc ctgggagacc cacaagggt ttttagccag ggaaaactga gccccagaa
5821 aacctaacca ctggcagggc agaattttgtt tgagggataa aacgacaaca aaataaatgt
5881 tcctgcagcc tgagattca ggttagagtac tgactaaggt ttaataagac aataggtgac
5941 ctgaggacat gcaagctgtt aaaatgcaac agcctcctgc tagagtact tgcacatgag
6001 cttgccttgcgaa gaaactaga ttagatgttt ctcaggatcc ctcctgcgc aggggttctc
6061 tgatttctgt gttctctgcc cagatggct gggggatgg agagtgtgt tattttcaact
6121 gcgatcatga gaccacagtt ctgggttatac tccctctcata catcaagccc cagaggag
6181 ggcaagagga acagccacaa acaagtactt taccaccaag cttagtggcc agtaaacacc

FIGURE 8B

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6241 ctggggacta gaaaaaggaa ccaactgtag gcacctctcc agggcctagg gagacaagtg
6301 tcctctcttc tgcatacatt tgggtcccc ttacagagcc ctgtccctg gctctctgg
6361 ctttgtgtct ctaacagtcc agatgtacac ccagcctcag ggggaaggca gctctctcca
6421 gacagagtct cagggcccaag caaggtcagg ttatctgctt tcattcaggg caacaaatga
6481 tacaaatggt gccagggagt ggcaaggcca tggggtagg tgggggtgtc tttttcttt
6541 cataaaatgtt aaacatcaga aaaaaaacctc tggaaatgacc
6601 ttcctcattc caggaggccc tggaaataagg aagaggcttc ttctgaggg agcttgagg
6661 aatttgaca gctgttgaca tgggatttg gaaaggtaga gctgtgactg gaggggcagg
6721 agatggtcca agtgtccatc cagagatgag actcttagaa tcaaagtgtt cagccagg
6781 agtctggag atcccacctt ctgtggccct gcaccttatg gaaaggcatt aagggggctc
6841 atcttagaat tctggttaca gcccagtgtct catcccagcg tatgctgcct cttagggca
6901 gcccccaagggg ccagccagcc tgtactctgg gcaagagccc aaaatggcta ggaatgttt
6961 actcccttaa tctctcccc agctacagag gaatctttc tctgcctggg ctcagaatgg
7021 gactgccaac tggctcatgg gtgggagaca cagtagtccaa acacctgtgg ccactggcat
7081 gacagtggtg ctctgtctcc ctgggtgaca cccaccctag gttccctccctt ggtatgtatg
7141 gggatgttcca gagaggctct tagcataaaa ggcatttaggt ggcattttt ctgtgtgccc
7201 ccaaaaaagct ccatggaaac aggacactgg tagctgcggg acacccgtgg acttgtgtat
7261 atggtcata gctttggaa gacaggacgt aaaggaaaat gagagaaaca aaatgggtca
7321 gatagctttg gccacagccc caggcagct ttggggccta tgacacttag tgcccttaga
7381 tgggatacat ttgcctcg ccccaagact cctccaactt acccgtecca tccaggccct
7441 gcacagctt aagaggctca cagttggca aatgcttaggg ctcatcaga ccactgtactt
7501 gactcagtgt ttgttaaaaat ggaaccactc ccgttggcct actgtttctc tcctgtactt
7561 cttgtaatga tagttattta ttgactctgg tagcaggcag ttcttaata aagatggttt
7621 ctcaacctgt tggggaaaaaa aaaaaaaaaa (SEQ ID NO:9)

Figure 8C

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AXO1 (Axonin-1 precursor, NM_005076)

MGTATRRKPHLLLVAALVSSSAWSSALGSQTTFGPVFEDQPL
SVLFPEESTEEQVLLACRARASPPATYRWKMNGTEMKLEPGSRHQLVGGNLVIMNPTK
AQDAGVYQCLASNPVGTVVSREAILRGFLQEFSSKEERDPVKAHEGWGVMLPCNPPAH
YPGLSYRWLLNEFPNFIPTDGRHFVSQTTGNLYIARTNASDLGNYSLATSHMDFSTK
SVFSKFAQLNLAEDTRLFAPSIKARFPAETYALVGQQVTLECFAGNPVPRIKWRKV
DGSLSPQWTTEAEP TLQIPSVSFEDEGYECEAENS KGRDTVQGRIIVQAQPEWLKV
IS DTEADIGSNLRLWGCAAAGKPRPTVRWLNRGEPLASQNRVEVLADLRF SKLSLED SGM
YQCVAENKHGTIYASAELAVQALAPDFRLNPVRRLI PAARGGEILIPCQPRAAPKAVV
LWSKGTEILVNSSRVTVPDGTLIIRNI SRSD EKG YTCFAENFMGKANSTGILSVRDA
TKITLAPSSADINLGDNLTLCQCHASHDPTMDLTFWTLDLDFIDFDKPGGHYRRRTNVK
ETIGDLTILNAQLRHGGKYTCMAQT VVD SASKEATV LVRGPPGPPGGVVVRD IGD TTI
QLSWSRGF DNHSPIAKYTLQARTPPAGKWKQVRTNPANI EGNAETAQV LGLTPWMDYE
FRVIASNILGTGEPSGPSSKIRTREAAPSVAPSGLSGGGGAPGELIVNWTPMSREYQN
GDGF GYLLSFR RQG STHW QTA RVPGADAQYFVYSNESVR PYTPFEVKIRSYNRRGDGP
ESLT ALVYSAEEPRVAPTKVWA KVGS SEMNV TWE PVQ QDMNGILLG YEIR YWKAGD
KEAAADRV RTAGL DT SARV SGLHP NT KYH VT VRAY N RAGT GPAS PSAN ATT M KPPP RR
PPGN I SWTF SSS SLSIK WDP VVP F RNE SAV TGY KML YQNDL HLT PTL HLT GKN WIE IP
VP EDI GH ALV QIR TT GP GGD G I PAEV H I VR NG GT SMM VEN MA VR PAH PG TVI SH SVA
MLILI GS LEL (SEQ ID NO: 10)

Figure 8D

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NROB2 (Nuclear hormone receptor, NM_021969)

1 gagctggaag tgagagcaga tccctaacca tgagcaccag ccaaccaggg gcctgccat
61 gccaggagc tgcaagccgc cccgccattc tctacgcact tctgagctcc agcctaagg
121 ctgtcccccg accccgttagc cgctgcctat gtaggcagca cccggcccgctc cagctatgtg
181 cacctcatcg cacctgcccgg gaggccttgg atgttctggc caagacagtg gccttcctca
241 ggaacctgcc atccttctgg cagctgcctc cccaggacca gccggcggctg ctgcagggtt
301 gctggggccc cctcttcctg cttgggttgg cccaagatgc tgtgacctt gaggtggctg
361 aggccccgtt gcccagcata ctcaagaaga ttctgctgga ggagcccgac agcagtggag
421 gcagtgccca actgccagac agaccccagc cctccctggc tgcggtgtcag tggctcaat
481 gctgtctgga gtccttctgg agcctggagc tttagccccaa ggaatatgccc tgcctgaaaag
541 ggaccatcct cttcaacccc gatgtgccag gcctccaaagc cgcctcccac attggcacc
601 tgcagcagga gctcaactgg gtgctgtgtg aagtccctgga accctgggtgc ccagcagccc
661 aaggccgcct gacccgtgtc ctccctcacgg cctccacccct caagtccatt ccgaccagcc
721 tgcttgggga cctcttcttt cgcccttatca ttggagatgt tgacatcgct ggccttcttg
781 gggacatgct ttgctcagg tgacctgttc cagcccgaggc agagatcagg tgggcagagg
841 ctggcagtgc tgattcagcc tggccatccc cagaggtgac ccaatgctcc tggagggca
901 agcctgtata gacagcactt ggctccttag gaacagctct tcactcagcc acaccccaaca
961 ttggacttcc ttgggttggc cacagtgtc cagctgcctg ggaggcttt ggtggcccc
1021 acagcctctg gcccaagact cctgtccctt ctggatgaa gaatgaaagc ttaggtctg
1081 tattggacca gaagtcctat cgacttata cagaactgaa ttaagttatt gattttgt
1141 ataaaaggtt taaaacacta aaaaaaaaa (SEQ ID NO:11)

FIGURE 9A

NROB2 (Nuclear hormone receptor, NM_021969)

MSTSQPGACPCQGAASRPAILYALLSSSLKAVPRPRSRCLCRQH
RPVQLCAPHRTCREALDVLAKTVAFRLRNLPFWQLPPQDQRLLQGCWGPLFLLGLAQ
DAVTFEVAEAPVPSILKKILLEPSSSGGSGQLPDRPQPSLAAVQWLQCCLESFWSLE
LSPKEYACLKGTLFNPDVPGQLQAASHIGHLQQEAHWVLCEVLEPWCPAAQGRLTRVL
LTASTLKSIPSTSLLGDLFFRPIIGDVDIAGLLGDMLLR (SEQ ID NO:12)

FIGURE 9B

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TM7SF1 (NM_003272)

1 cggcgcgatg cgccggagacc cccgcggggg cggcggcgcc cgtgagcccc gatgaggccc
 61 gagcgtcccc gcccgcgccgg cagcgcccc ggcccgatgg agaccccgcc gtgggaccca
 121 gcccgcacg actcgctgcc gcccacgctg acccccgccg tgccccctta cgtgaagctt
 181 ggcctcaccc tcgtctcac acgtgttctac gcgctgcctc tcgtgttcat ctacgtgcag
 241 ctctggctgg tgctgegtta ccgcacaag cggctcagct accagagcgt cttcccttt
 301 ctctgcctct tctgggcctc cctgcccggacc gtcctcttct ccttctactt caaagactt
 361 gtggcggcca attcgctca gcccctcgcc ttctggctgc tctactgtt ccctgtgtc
 421 ctgcagtttt tcaccctcac gctgatgaac ttgtacttca cgcaggtgat tttcaagcc
 481 aagtcaaaat attctccaga attactcaa taccgggtgc ccctctaccc ggcctccctc
 541 ttcatcagcc ttgtttctt gttggtaat ttaacctgtg ctgtgttgtt aaagacggga
 601 aattgggaga gaaaggat tat cgtctctgtg cgagtggcca ttaatgacac gctctcg
 661 ctgtgtgccg tctctctc catctgtctc tacaaaatct ctaagatgtc tttagccaac
 721 atttacttgg agtccaaggg ctccctccgtg tgtcaagtga ctgcccattcg tgcaccgtg
 781 atactgcttt acacctctcg ggcctgctac aacctgttca tcctgttattt ttctcagaac
 841 aagagcgtcc attcccttga ttatgactgg tacaatgtat cagaccaggc agatttgaag
 901 aatcagctgg gagatgctgg atacgttata ttggagtgat ttttattttt ttgggaactc
 961 ttacccatca ccttagtctt ttatttctt ctagttttagaa atccatcaaa ggacccattacc
 1021 aaccctggaa tggcccccaag ccatggattt agtcccagat ctattttctt tgacaaccct
 1081 cgaagatatg acagtgtatga tgaccccttgc tggaaacattt cccctcaggacttcaagg
 1141 ggtttgctc cagattacta tgattgggaa caacaaacta acagcttccctt ggcacaagca
 1201 ggaaccttgc aagactcaac tttggatctt gacaaacccaa gccttgggta gcatcagtt
 1261 acagtttat gacgattttc tcagatgaaa agcttcagaa aagcatagtg acagctgaat
 1321 ttttagggca cttttcttta agaaatagaa ctgttattttt atttggatca ggtttccat
 1381 ggcccctatag gaataagcaa taatgttagac tgataaaaccc ttattttagt actaaagagg
 1441 gagccttgc atttcagttgg gtataattt aactttttaa agaaaatctg tactttata
 1501 aagatgtatt ttgtataact taaaataataa tgctaaagta tactagggtt ttttttctt
 1561 gagaatgtt ctgcaatcat gttgtat ttttgcacagactt ttatgcataa ttcactttaa
 1621 aaatatagaa tatatggctt aatagtttt taaagctttt ggactaaagt attccacaaa
 1681 tcttacctct ttaggtcaact gatggtcaact ccgattctga gtgccacatt ggttagactcc
 1741 taaaatacag ttgacaactt agccaaattgc aactccagtg ttgataattt aaatgaaatg
 1801 gtaaaggcagc agactgttaag gtcttagag attttttttt aaggttcagg ccgttaggtt
 1861 ctcaaggaat ctcttaagg ttgccccaaag actggtactt ccttcagta gggcgctaat
 1921 gtatacacat taatgataag ttgataacat taaaatgtt gctgactt cctattaaac
 1981 ctccctctgct atgttcac (SEQ ID NO:13)

FIGURE 10A

TM7SF1 (NM_003272)

MRPERPRPRGSAPGPMETPPWDPARNDSLPPTLTPAVPPYVKLG
 LTVVYTVFYALLFVFIYVQLWLVLRYRKRLSYQSVFLFLCLFWASLRTVLFSFYFKD
 FVAANSLSPFVFVLLYCFPVCLQFFTTLTMNLYFTQVIFKAKSKYSPELLKYRLPLYL
 ASLFISLVFLLVNLTCAVLKVTGNWERKVIVSVRAVINDTLFVLCAVSLSIICLYKISK
 MSLANIYLESKGSSVCQVTAIGVTVILLYTSRACYNLFILSFSQNKSVDYDWYNV
 SDQADLKNQLGDAGYVLFGVVLFVWELLPTTLVYFFVRNPTKDLTNPGMVPShGFS
 PRSYFDNPRRYDSDDDLAWNIAPQGLQGGFAPDYYDWGQQTNSFLAQAGTLQDSTLD
 PDKPSLG (SEQ ID NO:14)

FIGURE 10B

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DLDH (dihydrolipamide dehydrogenase, NM_000108)

1 ggcgcaggggag gggagacctt ggcggacggc ggagccccag cggaggtgaa agtattggcg
61 gaaaggaaaaa tacagcggaa aaatgcagag ctggagtcgt gtgtactgct cttggccaa
121 gagaggccat ttcaatcgaa tatctcatgg cctacaggga ctttgcag tgcccttgag
181 aacttacgca gatcagccga ttgatgttga tgaacagtt ataggttctg gtcctggagg
241 atatgttgcg gctattaaag ctgcccagtt aggcttcaag acagtctgca ttgagaaaaaa
301 tgaaaacactt ggtggaacat gcttgaatgt tggttgtatt ctttctaagg ctttattgaa
361 caactctcat tattaccata tggcccatgg aacagattt gcatctagag gaattgaaat
421 gtccgaagtt cgcttgaatt tagacaagat gatggagcag aagagtactg cagtaaaagc
481 ttaaacaggt ggaattgcc acttattcaa acagaataag gttgttcatg tcaatggata
541 tggaaagata actggcaaaa atcaagtcac tgctacgaaa gctgtggcg gcactcaggt
601 tattgataca aagaacattc ttatagccac gggttcagaa gttactcctt ttccctggaaat
661 cacgatagat gaagatacaa tagtgcatt tacagggtgc ttatcttaa aaaaagttcc
721 agaaaaagatg gttgttattg gtgcaggagt aatagggtga gaattgggtt cagttggca
781 aagacttggc gcatgttga cagcaggatgaa atttttaggt catgtaggtg gagttggaaat
841 tgatatggag atatctaaaa actttcaacg catccttcaa aaacaggggg ttaaatttaa
901 attgaataca aaggttactg gtgctaccaa gaagtcagat ggaaaaattt atgtttctat
961 tgaagctgct tctgggtggta aagctgaagt tatcacttgc gatgtactct tgggttgcatt
1021 tggccgacga cccttacta agaatttggg actagaagag ctgggaattt aactagatcc
1081 tagaggtaga attccagtca ataccagatt tcaaactaaa attccaaata tctatgcccatt
1141 tggtgatgtt gttgttggc caatgctggc tcacaaagca gaggatgaag gcattatctg
1201 tggtaaggg atggctggcgt gtgctgtcattt cattgactac aattgtgtgc catcagtgtat
1261 ttacacacac cctgaagttt cttgggttgg caaatcagaa gagcaggatgaa aagaagagggg
1321 tattgagttac aaagttggga aattccattt tgctgctaaac agcagagcta agacaaatgc
1381 tgacacagat ggcattgttga agatccttgg gcagaaatcg acagacagag tactggggagc
1441 acatattttt ggaccagggt ctggagaaaat ggttaatgaa gctgtcttgc tttggaaata
1501 tggagcatcc tgtgaagata tagcttagatg ctgtcatgca catccgaccc tatcagaagc
1561 ttttagagaa gcaaatctt ctcgttcatt tggcaaatca atcaactttt gaatttggaaat
1621 attatataatt ttttttcttga aatttcttgg gtagcttttgc tagaagtcaatttccctgaaac
1681 aggatattctt cacagctcca agaatttcta ggactgaattt atgaaacttt tggaggttat
1741 ttaataggtt tggacaaaat ggaataactct tatatctata ttttacataa atttagtatt
1801 ttgtttcagt gcactaatat gtaagacaaa aaggactact tattgttagtc atcctggaaat
1861 atctccgtca actcatattt tcatgctgtt catgaaagat tcaatgcccc tgaatttaaa
1921 tagctttt ctctgataca gaaaaggatgaa attttacatg gctggagctt gaatttggata
1981 tgtgaacagt tgtgtttgaa gcacagtgtt caagtttattt ttaatttgggt tttcacatttgc
2041 gaaacaagtc agtcatcattt atatgattca aatgtctata aaccaaaactg atgtaagtaa
2101 atggtcttcc acttggtttta tttaaaccttca aatttcttgc attttagggg tagcattttgt
2161 gttgaagagg ttttaaagct tccattgttgc tctgcaactt ctagggtaa ttatatagtt
2221 accccaaattt agagagtcta ttacggaaatc tcaaatacgt gggcattcaa atgtattaca
2281 gtggggaaatg aagatactgaaataaacgtc tttaaatatttgc (SEQ ID NO:15)

FIGURE 11A

DLDH (dihydrolipamide dehydrogenase, NM 000108)

MQSWSRVYCSLAKRGHFNRI SHGLQGLSAVPLRTYADQPI DADV
TVIGSGPGGYVAAIAKAAQLGFKTCVIEKNETLGGTCLNVGCI PSKALLNNSHYYHMAH
GTDFASRGIEMSEVRNLNDKMMEQKSTAVKALTGGIAHLFKQNKKVVHVNGYKGITGKN
QVTATKADGGTQVIDTKNILIATGSEVTPFPGITIDEDTI VSSTGALSLKKVPEKMVV
IGAGVIGVELGSVWQRLGADVTAVEFLGHVGCGVGDMEISKNFQRILQKQGFKFKLNT
KVTGATKKSDGKIDVSIEAASGGKAEVITCDVLLVCIGRRPFTKNLGLEELGI ELDPR
GRIPVNTRFQTCKPNIYAIGDVVAGPMLAHKAEDEGI ICVEGMAGGAHVIDYNCVPSV
IYTHPEVAVGKSEEQLKEEGIEYKVKGKFPAANSRAKTNADTDGMVKILGQKSTDGV
LGAHILGPGAGEMVNEAALALEYGASCEDIARVCHAHPTLSEAFREANLAASFGKSINF (SEQ ID NO:16)

FIGURE 11B

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MAT2B (methionine adenosyltransferase II, beta, NM_013283)

```

1 gttctggcc tagggaggg gggccgaggg cgtctgagct gaggcccgcg tcgatcctgg
61 gttggaggag gtggcggcgc ctgaggctgc ggcgtaaaga cgccggcat ggtggggcg
121 gagaaaagagc tctctataca ctttggccc gggagctgtc ggctgggtgga ggaggaagtt
181 aacatcccta ataggagggt tctgggtact ggtgccactg ggcttcttgg cagagctgt
241 cacaagaat ttccagcagaa taattggcat gcagttggct gtggtttcag aagagcaaga
301 cccaaatttg aacaggtaa tctgttggat tctaattgcag ttcatcacat cattcatgtat
361 tttcagcccc atgttatagt acattgtca gcagagagaa gaccagatgt ttagaaaaat
421 cagccagatg ctgcctctca acttaatgtg gatgcttctg gaaatttagc aaaggaagca
481 gctgctgttgc gaggcatttct catctacatt agctcagatt atgtatttga tggaaacaaat
541 ccacccatcaga gagaggaaga cataccagct cccctaaatt ttagatggcaa aacaaaatta
601 gatggagaaa aggctgtctt ggagaacaat ctaggagctg ctgttttgag gattccatt
661 ctgtatgggg aagttgaaaa gctcgaagaa agtgcgtgtga ctgttatgtt tgataaaagt
721 cagttcagca acaagtcagc aaacatggat cactggcagc agaggttccc cacacatgtc
781 aaagatgtgg ccactgtgtg ccggcagcta gcagagaaga gaatgctgga tccatcaatt
841 aaggaaacct ttcaactggc tggcaatgaa cagatgacta agtataat ggcatgtgca
901 attgcagatg cttcaacct ccccagcagt cacttaagac ctattactga cagccctgtc
961 ctaggagcac aacgtccgag aaatgcttag cttgactgct ccaaatttggaa gaccttggc
1021 attggccaac gaacaccatt tcgaatttggaa atcaaagaat cactttggcc ttccctcatt
1081 gacaagagat ggagacaac ggtcttcat tagtttattt gtgttgggtt cttttttttt
1141 tttaaatgaa aagtatagta tgtggactt tttaagaac aaaggaaata gttttgtatg
1201 agtacttta ttgtgactct taggatctt caggtaaatg atgccttgc actatgaaa
1261 ttgtctaaag aaactaaagg gcagtcattgc cctgttgc gtaatttttcc tttttatcat
1321 ttgtttgtc ctggctaaac ttggagttt agtataatggatttatttatttatttatttattt
1381 gagagtcaagg atgaagcaga tctgcgttag acttttcaga tggaaatttgtt catttcgt
1441 acctccatat ttccaggatt ttgtgactg cttgacccattt catgtttagtttatttatttattt
1501 gtgtgaaata gtataaaaat cattgggtt cattatttgc ttgcctgag ctcagatcaa
1561 aatgttggaa gaaaggaact ttattttgc aagttacgta cagtttttat gcttgagata
1621 ttcaacatg ttatgtat tggaaacttct acagcttgcat gcttcctgct ttatagcag
1681 ttatggggaa gcacttgaaa gagcgtgtgt acatgttattt ttgttcttagg caaacattga
1741 atgcaaacgt gtattttt aatataaata tataactgtc ctttcatcc catgttgcgc
1801 ctaagtgata ttccatgtt gtgggttatac tcataataat gggccttgc agtctttca
1861 ccattcatga ataataataa atatgtactg ctggcatgtc atgcattgtt ttcttgcattt
1921 tacttcttt tttaaatgtt aggaccaaac ttctaaacta atgttctt tggcttttta
1981 attttaaaaa attacattct tctgtatgaa catgtgatac atacaaaaga atatagttta
2041 atatgtattt aataaaaaca caataaaaatt aaaaaaaaaa aaaaaaaaaa (SEQ ID

```

NO:17)

FIGURE 12A

MAT2B (methionine adenosyltransferase II, beta, NM_013283)

```

MVGREKELSIHFVPGSCRLVEEVNIPNRRVLVTGATGLLGRAV
HKEFQQNNWHAVGCGFRRARPFEQVNLLDSNAVHHIIHDFQPHVIVHCAAERRPDVV
ENQPDAASQLNVDASGNLAKEAAAVGAFLIYIISDYVFDGTNPYREEDI PAPLNLYG
KTKLDGEKAVLENNLGAAVLRIPILYGEVEKLEESAFTVMFDKVQFSNKSANMDHWQQ
RFPTHVKDVATVCRQLAEKRMIDPSIKGTFHWSGNEQMVKYEMACAIADAFNLPSHL
RPITDSPVLGAQRPRNAQLDCSKLETLGIGQRTPFRIGIKESELWPFLIDKRWRQTVFH (SEQ ID

```

NO:18)

FIGURE 12B

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STC-2 (stanniocalcin-2, NM_003714)

1 gaggaggagg gaaaaggcga gaaaaagga agagtggag gaggagggga agcggcgaag
 61 gaggaagagg aggaggagg aagggggagc acaaaggatc caggtctcc gacggaggt
 121 taataccaag aaccatgtgt gccgagcgc tggccagtt catgaccctg gcttgggtgt
 181 tggccaccc ttgacccggcg cgggggaccc acgcccacaa cccacccgag ggtccccaaag
 241 acaggagctc ccagcagaaa ggccgcctgt ccctgcagaa tacagcggag atccagcact
 301 gtttggtcaa cgctggcat gtgggtgtg gcgtgttga atgttcgag aacaacttct
 361 gtgagattcg gggcttacat gggatttgc tgactttct gcacaacgct ggaaaatttg
 421 atgcccaggg caagtcatc atcaaagacg ccttgaatg taaggcccac gctctcgcc
 481 acaggttcgg ctgcataaagc cggaagtgc cggccatcag gaaaatggtg tcccagttgc
 541 agcgggaatg ctacctaag cacgacctgt gcgcggctgc ccaggagaac acccggtga
 601 tagtggagat gatccatttc aaggacttgc tgctgcacga accctacgtg gacctcgtga
 661 acttgcgtct gacctgtggg gaggaggtga aggaggccat caccacacgc gtgcagggttc
 721 agtgtgagca gaactgggaa agcctgtgtc ccatttttagt ctctgcacc tcggccatcc
 781 agaaggctcc cacggcgc cccgagcgc agccccaggt ggacagaacc aagctctcca
 841 gggccacca cggggaaagca ggacatcacc tcccagagcc cagcagtagg gagactggcc
 901 gaggtgccaa gggtgagcga ggtagcaaga gccacccaaa cccatgcgc cgaggcagag
 961 tcggggcct tggggctcag ggaccttccg gaagcagcga gtgggaagac gaacagtctg
 1021 agtattctga tatccggagg taaaatgaaa ggcctggcca cggaaatctt cctccacgcc
 1081 gtccattttc ttatctatgg acattccaaa acatttacca ttagagaggg gggatgtcac
 1141 acgcaggatt ctgtggggac tgtggacttc atcgagggtgt gtgttcgcgg aacggacagg
 1201 tgagatggag accccctgggg ccgtggggc tcaggggtgc ctggtaatt ctgcacttac
 1261 acgtactcaa gggagcgc cccgcgttata ctcgtacctt tgtcttctt ccatctgtgg
 1321 agtcagtggg tgtcggccgc tctgttgtgg gggaggtgaa ccaggaggg gcaggcaag
 1381 gcagggcccc cagagctggg ccacacagtg ggtgctggc ctcgccccga agcttctgg
 1441 gcagcagcct ctggtgctgt ctccgcggaa gtcagggcgg ctggattcca ggacaggagt
 1501 gaatgtaaaa ataaatatcg cttagaatgc aggagaaggg tggagaggg gcagggccg
 1561 aggggggtct tggtgccaaa ctgaaaattca gtttcttgc tggggcctt cggttcagag
 1621 ctcttggcga gggtgaggg aggagtgtca tttctatgtg taatttctga gccattgtac
 1681 tgtctggct gggggggaca ctgtccaagg gagtggcccc tatgagttt tatttttaacc
 1741 actgctcaa atctcgatt cactttttt atttatccag ttatatctac atatctgtca
 1801 tctaaataaa tggcttcaa acaaagcaac tgggtcatta aaaccagctc aaagggggtt
 1861 taaaaaaaaaaa aaaaccagcc catccttga ggctgatttt tctttttt aagttctatt
 1921 taaaaagcta tcaaacagcg acataagccat acatctgact gcctgacatg gactctgcc
 1981 cactggggg aaacctata cccagaggaa aatacacacc tggggagtac atttgacaaa
 2041 tttcccttag gatttcgtt tctcacctt accctcagcc aagattggta aagctgcgtc
 2101 ctggcgattc caggagaccc agctggaaac ctggcttctc catgtgaggg gatggaaag
 2161 gaaagaagag aatgaagact acttagtaat tcccatcagg aaatgctgac ctttacata
 2221 aaatcaagga gactgctgaa aatctctaag ggacaggatt ttccagatcc taattggaaa
 2281 ttttagcaata aggagaggag tccaagggga caaataaagg cagagagaga gagagagaga
 2341 gggagaggaa gaaaagagag agaaaaaaga gcctcgtgcc (SEQ ID NO:19)

FIGURE 13A

STC-2 (stanniocalcin-2, NM_003714)

MCAERLGQFMTLALVLATFDPARGT DATNPPEGPQDRSSQQKGR
 LSLQN TAEI QHCLVNAGDVCGVFECFENN SCEIRGLHGICMFLHNAGKFDAQGKSF
 IKDAL KCKAH ALRHRFGCISRKCPAIREMVSQQLQRECYLKHDLCAAQENTRVIVE MI
 HFKDLLLHEPYVDLVNLLTCGEEVKEAITHSVQVQCEQNWGSLCSILSFCTS AIQKP
 PTAPPERQPQV DRTKLSRAHHGEAGHHLPEPSSRETGRGAKGERGSKSHPN A HARGRV
 GGLGAQGP GSSEWEQSEYSDIRR (SEQ ID NO:20)

FIGURE 13B

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PPBI (alkaline phosphatase, intestinal precursor, NM_001631)

1 gttccctggtg tccccacttc gcctccctcc tgctgcccc aagacatgca ggggcctgg
 61 gtgctgctgc tgctggcct gaggctacag ctctccctgg gcgtcatccc agctgaggag
 121 gagaaccgg ccttctggaa ccggcaggca gctgaggccc tgatgctgc caagaagctg
 181 cagccatcc agaaggctcg cagaacactc atcctttcc tggcgatgg gttgggggtg
 241 cccacggta cagccaccag gatcctaaag gggcagaaga atggcaaact gggcctgag
 301 acgcccctgg ccatggaccg cttccatac ctggctctgt ccaagacata caatgtggac
 361 agacaggtgc cagacagcgc agccacagcc acggcctacc tgtgcgggt caaggccaac
 421 ttccagacca tcggctttag tgcagccgc cgcttaacc atgcaacac gacacgcggc
 481 aatgaggtca tctccgtat gaaccggcc aagcaagcag gaaagtcaat aggagtggtg
 541 accaccacac gggtcagca cgcctcgcca gccggcacct acgcacacac agtgaaccgc
 601 aactgttact cagatgctga catgcctgcc tcagccccc aggaggggtg ccaggacatc
 661 gccactcagc tcattccaa catggacatt gacgtatcc ttggcgagg cgcgaatc
 721 atgttccca tggggacccc agacccttag tacccagctg atgcagcca gaatggaatc
 781 aggctggacg ggaagaacct ggtgcaggaa tggctggcaa agcaccagg tgcctggat
 841 gtgtgaaacc gcactgagct catgcaggcg tccctggacc agtctgtgac ccatttcatg
 901 ggccttttgc agcccgaga cacgaaatat gagatccctcc gagacccac actggacccc
 961 tccctgtatgg agatgacaga ggctccctg cgctgtatgg caggaaccc cgcggcttc
 1021 taccttttgc tggagggcgg cgcacatcgac catggtcatac atgagggtgt ggcttaccag
 1081 gcagtcactg aggcggctat gttcagcgc gccattgaga gggcgccca gtcaccagc
 1141 gaggaggaca cgctgaccct cgtaccgct gaccactccc atgtttctc ctttgggtggc
 1201 tacacccatgc gaggagatc catttcggtt tggggccca gcaaggctca ggacagcaaa
 1261 gcctacacgt ccattctgtatgg cggcaatggc cgggctacg tttcaactc aggctgctg
 1321 ccagacgtga atgagagcga gagcgggagc cccgattacc agcagcaggc ggcgggtggcc
 1381 ctgtcgcccg agacccacgg aggcaagac gtggcggtgt ttgcgcggg cccgcaggcg
 1441 cacctggatgc atggatgtatggc ggagcagac ttctgtatgc atgtcatggc cttcgctgcc
 1501 tgtctggatgc cctacacggc ctgcacccctg ggcgtccccg cctgcaccac cgcacccggc
 1561 cacccatgg cgcgtcgct gccactgctg gccgggaccc tgctgtgtcc ggggggtgtcc
 1621 gctgtccct gaggccca ctccggagtt atctgtatcc ccacccctgg gctctgtcc
 1681 ctgttcccg tcctgagccg ccacttccatgg cgaacacaca caggtgtctt ggcgttggac
 1741 cttcacccatgc tagagataaa ccagctcatgg ctggcgccgg gggcccttc ttccctccgc
 1801 atccccatgc gggagcagga gcccaggccg ccctgggagc tgagctggg acttcaggaa
 1861 cctccccatgc gttgttctc tgattttcc tcccaacccc agagactgca gatttggcc
 1921 atgcggctgc ctgcacccca gacaataaa ggacaaaac cacccaaaccc ccaccctgcc
 1981 tctatccaa ggaagaccaa gcaggcctgg acccagagac gtcccccatac gtgggacacg
 2041 acacacccatgc accgcgtgcc ccacccgtt agcttcaatc ctggcagcac ctggtagacc
 2101 caaggacttgc ggtggatcatgg gacacctgaa gaagagaagc ttccggcaac cctgcaccc
 2161 acccaaggatgc gctactggat cgggattcc cagggggctt ttgacacatgt cctctgtgt
 2221 ctccccatgc gatcattcc acacccatgc acctgaccaa gggaccaatg aggacagaggc
 2281 ttggcccaatgc tcacagccatgc tcagatgctt cctggggccca agtgcacccatt ccaggtcacc
 2341 agatccaaagg agcgtttag gacatctggg tacagggcag caacccagag cccatggggc
 2401 ctccgggatgc atctggatgc tggcataga ttctcaaca aggaagactc ccctgcctcc
 2461 tcaaggatgc cattctccatgc ggagacaaag caataataaa aggtgtttaga caatgt (SEQ

ID NO:21)

FIGURE 14A

PPBI (alkaline phosphatase, intestinal precursor, NM_001631)

MQGPWVLLLGLRLQLSLGVI PAEEENPAFWNRQAAEALDAKK
 LQPIQKVKANLILFLGDGLGVPTVTATRILKGQKNGKLGPETPLAMDRFPYLA
 NVDRQVPDSAATATAYLCGVKANFQTIGLSAARFNQCNTTRGNEVISVMNRAKQAGK
 SVGVVTTTRVQHASPAGTYAHTVNRNWYSDADMPASAROEGCQDIATQLISNMIDVI
 LGGGRKYMFPMTGTPDPEYPADASQNGIRLDGKNLVQEWLAKHQGAWYVWNRT
 LDQSVTHLMGLFEPGDTKYEILRDPTLDPSLMEETAA
 LLRSRNPRGFYLFVEGGRI
 DHGHHEGVAYQAVTEAVMFDDAIERAGQLTSEEDTLTVADHS
 HVFSFGGYTLRGSS
 IFGLAPSQAQDSKAYTSILYGNPGYVFNSGVRPDVNESES
 GSPDYQQQAAVPLSSET
 HGGEDVAVFARGPQAHVLHVGVQE
 QSFVAHMAFAACLEPYTACDLALPACTTDAHPV
 AASLPPLL
 AGTLLLGASAAP (SEQ ID NO:22)

FIGURE 14B

SLNAC1 (sodium channel receptor SLNAC1, NM_004769)

```

1 agaattccggc acgacggggt tctggccatg aagcccaccc caggcccaga ggaggccccgg
61 cggccagcct cggacatcg cgtgttcgcc agcaactgct cgatgcacgg gctggccac
121 gtcttcgggc caggcagcct gagcctgcgc cggggatgt gggcagcggc cgtggctctg
181 tcagtggcca ctttctcta ccaggtggct gagaggggtgc gctactacag ggagttccac
241 caccagactg ccctggatga gcgagaaaagc caccggctca tttcccgcc tgtcacccctg
301 tgcaacatca acccaactgcg ccgctcgcgc ctaacgccc acgacctgca ctgggttggg
361 tctgcgtgc tgggcctgga tcccgcagag cacgcccct tcctgcgcgc cctggccgg
421 cccccctgcac cgccccggctt catgcccagt cccaccttg acatggcgca actctatgcc
481 cgtgcgtggc actccctgga tgacatgctg ctggactgtc gttccgtgg ccaaccttgt
541 gggcctgaga acttcaccac gatttcacc cggatggaa atgtctacac atttaactct
601 ggcgcgtatg gggcagact gctaccact actagggtg gcatgggcaa tgggcgtggac
661 atcatgctgg acgtgcagca ggaggaatat ctacctgtgt ggagggacaa tgaggagacc
721 ccgttgagg tggggatccg agtgcagatc cacagccagg aggagccgccc catcatcgat
781 cagctggct tgggggtgtc cccgggctac cagaccttg ttcttgcca gcagcagcag
841 ctgagcttcc tgccaccggc ctggggcgtat tgcaagttag catctctgaa ccccaactat
901 gagccagagc cctctgatcc cctaggctcc cccagcccc gccccagccc tccctataacc
961 cttatgggt gtgcgcgtgc ctgcgaaacc cgctacgtgg ctgcgaagtgc cggctgcccga
1021 atgggttaca tgccaggcga cgtgccagt tgcagcaccc acgagtacaa gaactgtgcc
1081 caccggcca tagatgcat gcttcgcag gactcgtgcg cctgccccaa cccgtgcgc
1141 agcacgcgt acgccaaggaa gcttcctatg gtgcggatcc cgagccgcgc cgcgcgcgc
1201 ttcctggccc ggaagctcaa ccgcagcgg gcctacatcg cgagaaacgt gctggccctg
1261 gacatcttct ttgaggccct caactatgag accgtggagc agaagaaggc ctatgagatg
1321 tcagagctgc ttggtgacat tggggccag atggggctgt tcatcgggc cagcctgctc
1381 accatcctcg agatcctaga ctacctctgt gaggtttcc gagacaaggt cctggatata
1441 ttctggAACCC gacagcactc ccaaaggcac tccagcacca atctgcttca ggaagggtcg
1501 ggcagccatc gaacccaagt tccccaccc agcctggcc ccagacccctcc caccctctccc
1561 tgtgcgtca ccaagactct ctccgcctcc caccgcaccc gctaccttgt cacacagctc
1621 tagacctgt gtctgtgtcc tcggagcccc gccctgacat cctggacatg cctagcctgc
1681 acgtagctt tccgtcttca ccccaaataa agtcttaatg catcaaaaaaa aaaaaaaaaaa
1741 aaaaaaa (SEQ ID NO:23)

```

FIGURE 15A

SLNAC1 (sodium channel receptor SLNAC1, NM_004769)

```

MKPTSGPEEARRPASDIRVFASNCMHGLGHVFGPGSLSLRRGM
WAAAVLVSATFLYQVAERVYYREFHHQTALDERESHRLIFPAVTLCNINPLRRSRL
TPNDLHWAGSALLGLDPAEHAFLRALGRPPAPPGFMPSPTFDMAQLYARAGHSLLDM
LLDCFRGQPCGPENFTTIFTRMGKCYTFNSGADGAELLTTRGGMGNGLDIMLDVQQ
EEYLPVWRDNEETPFEVGVIRVQIHSQEPIPIDIQLGLGVSPGYQTFVSCQQQQLSFLP
PPWGDCSSASLPNEYEPEDPLGSPPSPSPSPPYTLMGCRLACTRYVARKCGCRMVY
MPGDVPVCSPQQYKNCAHPAIDAMLRKDSCACPNPCASTRYAKELSMVRIPSRAAARF
LARKLNREAYIAENVLALDIFFEALNYETVEQKKAYEMSELLGDIGGQMGLFIGASL
LTILEILDYLCEVFRDKVLGYFWNRQHSQRHSSTNLLQEGLGSRTQVPHLSLGPRPP
PPCAVTKTLASHRTCYLVTQL (SEQ ID NO:24)

```

FIGURE 15B

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CAH4 (carbonic anhydrase iv precursor, NM_000717)

```
1 ctcgggtgcgc gaccccggtc cagaggactc tttgctgtcc cgcaagatgc ggatgctgct
61 ggcgcctcctg gccctctccg cggccggcc atcggccagt gcagagtac actggtgcta
121 cgaggttcaa gcccggactt ccaactaccc ctgcttgggt ccagtcaagt ggggtggaaa
181 ctggccagaag gaccggccagt cccccatcaa catcgtaacc accaaggca aggtggacaa
241 aaaactggga cgcttcttct tctctggcta cgataagaag caaacgtgga ctgtccaaaa
301 taacgggcac tcagtgtatga tggtgctgga gaacaaggcc agcatttctg gaggaggact
361 gcctgccccca taccaggcca aacagttgca cctgcactgg tccgacttgc catataaggg
421 ctcggagcac agcctcgatg gggagcactt tgccatggag atgcacatacg tacatgagaa
481 agagaagggg acatcgagga atgtgaaaga ggcccaggac cctgaagacg aaattgcgg
541 gctggcctt ctgggtggagg ctggaaaccca ggtgaacgag ggcttccagc cactgtgga
601 ggcactgtct aatatccccca aacctgagat ggcactacg atggcagaga gcagcctgtt
661 ggacctgctc cccaggagg agaaactgag gcactactc cgctacactgg gctcactcac
721 cacaccgacc tgcgatgaga aggtcgctcg gactgtgttc cgggagccca ttcagcttca
781 cagagaacag atcctggcat tctctcagaa gctgtactac gacaaggAAC agacagttag
841 catgaaggac aatgtcagggc ccctgcagca gctggggcag cgacacggta taaagtccgg
901 ggccccgggt cggccgctgc cctgggcctt gcctgcctg ctggggccca tgctggcctg
961 cctgctggcc ggcttcctgc gatgatggct cacttctgca cgacgcctct ctgttgccctc
1021 agctctccaa gttccaggtt tccggccctt agcctccca ggtggggactt taggcatgat
1081 taaaatatgg acatatttt ggag (SEQ ID NO:25)
```

FIGURE 16A

CAH4 (carbonic anhydrase iv precursor, NM_000717)

```
RMLLALLALSAARPSASAESHWCYEVQAESSNYPCLVPVKWGG
CQKDRQSPINIVTTKAKVDKKLGRFFFSGYDKQTWTVQNNGHSVMMLENKASISG
GLPAPYQAKQLHLHWSDLPYKGSEHSLGEHFAMEMHIVHEKEKTSRNVKEAQDPE
EIAVLAFLVEAGTQVNEGFPQLVEALSNIPKPEMSTTMAESSLLLPKEEKLRYF
YLGSLTTPTCDEKVVWTVFREPIQLHREQILAFSQKLYDKEQTVSMKDNRPLQQL
QRTVIKGAPGRPLPWALPALLGPMLACLLAGFLR (SEQ ID NO:26)
```

FIGURE 16B

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PA21 (phopholipase a2 precursor, NM_000928)

```
1 tggtcatctc agttctttc tcaccttgac tgcaagatga aactccttgc gctagctgtg
61 ctgctcacag tggccgcgc cgacagcgcc atcagccctc gggccgtgtg gcagtcgc
121 aaaatgatca agtgcgtat cccggggagt gacccttct tggaaatacaa caactacggc
181 tgctactgtg gcttgggggg ctcaggcacc cccgtggatg aactggacaa gtgctgccag
241 acacatgaca actgctatga ccaggccaag aagctggaca gctgtaaatt tctgctggac
301 aacccgtaca cccacaccta ttcatactcg tgctctggct cgccaatcac ctgttagcagc
361 aaaaacaaag agtgtgaggc cttcatattgc aactgcgacc gcaacgctgc catctgttt
421 tcaaaagctc catataacaa ggcacacacaag aacctggaca ccaagaagta ttgtcagagt
481 tgaatatcac ctctaaaaag catcacctct atctgcctca tctcacactg tactctccaa
541 taaagcacct tgttgaaaga cctaaaaaaa aaaaaaaaaa aaaaa (SEQ ID NO:27)
```

FIGURE 17A

PA21 (phopholipase a2 precursor, NM_000928)

```
KLLVLAVLLTVAADSGISPRAVWQFRKMIKCVIPGSDPFLEY
NYGCYCGLGGSGTPVDELDKCCQTHDNCYDQAKKLDSCFKLDPYHTYSYSCSGS
ITCSSKNKECEAFICNCDRNAAICFSKAPYNKAHKNLDTKKYCQS (SEQ ID NO:28)
```

FIGURE 17B

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PAR2 (proteinase activated receptor 2 precursor, NM_005242)

```

1 taaaaacctaa cccgcctgg ggaggcgcc agcagaggct ccgattcggg gcaggtgaga
61 ggctgacttt ctctcggtgc gtccagtggaa gctctgagtt tcgaatcgcc ggcggcggat
121 tccccgcgcg cccggcgctcg gggcttccag gaggatgcgg agccccagcg cggcgtggct
181 gctgggggcc gccatcctgc tagcagcctc tctctcctgc atgggcacca tccaaggaac
241 caatagatcc tctaaaggaa gaagccttat tgtaaggtt gatggcacat cccacgtcac
301 tggaaaagga gttacagttg aaacagtctt ttctgtggat gagtttctg catctgtctt
361 cactgaaaaa ctgaccactg tcttccttcc aattgtctac acaattgtgt ttgtgtggg
421 tttgccaagt aacggcatgg ccctgtgggt ct当地tccat cgaactaaga agaagcaccc
481 tgctgtgatt tacatggcca atctggcctt ggctgacccctc ctctctgtca tctggccc
541 cttgaagatt gcctatcaca tacatggcaa caactggatt tatggggaaag ctcttgtaa
601 tgtgcttatt gccttttct atggcaacat gtactgttcc attctcttca tgacctgcct
661 cagtgtgcag aggtattggg tcatctgtgaa cccatgggg cactccagga agaaggcaaa
721 cattgccatt ggcattctccc tggcaatatg gctgtgatt ctgtgtgtca ccatccctt
781 gtatgtcgtg aagcagacca tcttcattcc tgccctgaac atcacgaccc gtcatgtgt
841 tttgctctgag cagctcttgg tggagacat gttcaattac ttccctctc tggccattgg
901 ggtcttctg ttcccagcct tcctcacagc ctctgcctat gtgctgtatgatc tcaaatgct
961 ggcataatcc gccatggatg aaaactcaga gaagaaaaagg aagagggcca tcaaatcat
1021 tgtcaactgtc ctggccatgt acctgatctg ct当地actcctt agtaacccctc tgcttggt
1081 gcattatccc ctgattaaga gccaggggca gagccatgtc tatgcccgtt acattgttagc
1141 cctctgcctc tctaccctta acagctgcat cgacccttt gtctattact ttgtttcaca
1201 tgatttcagg gatcatgcaa agaacgctct ccttgcga agtgtccgca ctgtaaagca
1261 gatgcaagta tccctcacct caaagaaaaca ctccaggaaa tccagcttcc actcttcaag
1321 ttcaaccact gttaaagacct cctattgagt ttccaggtc ctcagatggg aattgcacag
1381 taggatgtgg aacctgttta atgttatgag gacgtgtctg ttatccata atcaaaaagg
1441 tctcaccaca taccatgtgg atgcagcacc tctcaggatt gctaggagct cccctgtttg
1501 catgagaaaa gtagtccccca aaattaacat cagtgtctgt ttcaaatct ctctactcag
1561 atgaccggcag aaactgaacc aacagaagca gactttcag aagatggtga agacagaaac
1621 ccagtaactt gcaaaaagta gacttgggt gaaagactcac ttctcagctg aaattatata
1681 tatacacata tatataattt acatctggaa tcatgataga ctgtttaggg cttcaaggcc
1741 ctcagagatg atcagtccaa ctgaacgacc ttacaaatga gggaaaccaag ataaatgagc
1801 tgccagaatc aggtttccaa tcaacagcag tgagttggaa ttggacagta gaatttcaat
1861 gtccagttag tgaggttctt gtaccactc atcaaaatca tggatcttgg ctgggtgcgg
1921 tgcctcatgc ctgtatcc acgactttgg gaggctgagg caggcaatca cttgaggtca
1981 ggagttcgag accagcctgg cc当地atggc gaaacctcat ctctactaaa aataaaaaag
2041 ttaaccagggt gtgtggtgca cgtttaatccc acgttact caggaggctg aggccacaaga
2101 attgagttatc actttaactc aggaggcaga ggttgcagt agccgagatt gcaccactgc
2161 actccagctt gggtgataaaa ataaaaataaa atagtcgtga atcttgcattca aatgcagat
2221 tcctcagatt caataatgag agctcagact gggaaacaggg cccaggaatc tgggtgtac
2281 aaacctgcatt ggtgtttatg cacacagaga ttgagaacc attgttctga atgctgttcc
2341 cattgacaa agtgcgtga taattttga aaagagaagc aaacaatggt gtctcttta
2401 tggtcagctt ataatgaaat ctgttggacttatttgg actttgaatt atttctttat
2461 taaccctctg agtttttggta tggatatttta ttggaaaaaa atgcaatcag gattttaaac
2521 atgtaaataac aaattttgtt taacttttga tgactttagt gaaatttca ggtgtctga
2581 gtaatagatt gtttgcac ttggatagc atttgcact tagtatttttta aaaaataatt
2641 gttggagtat ttattgttag ttttggactt atacaatggat ataaagcctt
2701 cagagggttt ggaccacatc tcttggaaa atagttgca acatatttaa gagataactt
2761 atgccaat gactttatc aacgattgtt tttgtgactt ttggaaaaataa ttatatttatt
2821 gtgtatgtt tttataataa acaaaaattt tttacaact taaaaaaaaaaaa (SEQ
ID NO:29)

```

FIGURE 18A

PAR2 (proteinase activated receptor 2 precursor, NM_005242)

RSPSAWLLGAAILLAASLSCSGTIQGTNRSSKGRSLIGKVDG
SHVTGKGVTVETVFSVDEFSASVLTGKLTTVFLPIVYTIVFVVGLPSNGMALWVFLF
TKKKHPAVIYMANLALADLLSVIWPLKIAYHIHGNNWIYGEALCNVLIGFFYGNMY
SILFMTCLSVQRWVIVNPMGHSRKANIAIGISLAIWLLILLVTIPLYVVVKQTIFI
ALNITTCHDVLP EQLLVGDMFNYFLSLAIGVFLFP AFLTASAYVLMIRMLRSSAMDE
SEKKRKRAIKLIVTVLAMYLICFTPSNLLL VVHYFLIKSQGQSHVYALYIVALCLST
NSCIDPFVYYFVSHDFRDHAKNALLCRSVRTVKQM QVSLTSKKHSRKSSSYSSSSTT
KTSY (SEQ ID NO: 30)

FIGURE 18B

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IDE (insulin-degrading enzyme, NM_004969)

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1 cggcgtcgaa ggcacacgag gaagcgttt cggtgatccc ggcgactgcg ctggctaatt
61 cggtaaccggc tagcgtggct tctgcaccc gcactgccc gcacctccg ctcaagtc
121 ggcgcggcc tgccgcctcc ggagcgctg tgggtttcc aaaaaaaagac ttacagcaaa
181 atgaataatc cagccatcaa gagaatagga aatcacatta ccaagtctcc tgaagacaag
241 cgagaatatc gagggctaga gctggccat ggtatcaaag tacttcttat gagtgatccc
301 accacggata agtcatcagc agcacttgat gtgcacatag gtcattgtc ggatctcca
361 aatattgctg gcttaagtca ttttgtgaa catatgctt tttgggaaac aaagaaatac
421 cctaaagaaa atgaatacag ccagttctc agtgagcatg caggaagttc aaatgcctt
481 actagtggag agcataccaa ttactatTTT gatgtttctc atgaacaccc agaagggtgcc
541 ctagacaggt ttgcacagg tttctgtgc cccttggcg atgaaagttt caaagacaga
601 gaggtgaatg cagttgattc agaacatgag aagaatgtga tgaatgatgc ctggagactc
661 tttcaattgg aaaaagctac agggaatccct aaacacccct tcagtaaatt tgggacaggt
721 aacaatata ctctggagac tagaccaa ac caagaaggca ttgatgtaa agaagagcta
781 ctgaaattcc attctgcta ctatccatcc aacttaatgg ctgttgtgt ttagtgtcga
841 gaatcttag atgacttgac taatctggg gtaaaggatTTT tttctgaagt agagaacaaa
901 aatgtccat tgccagaatt tcctgaacac ccttccaag aagaacatct taaacaactt
961 tacaaaatag taccattaa agatattagg aatctctatg tgacatttc cataacctgac
1021 cttcagaaat actacaaatc aaatccgtt cattatctt gtcatctcat tgggcatgaa
1081 ggtcctggaa gtctgttattc agaacttaag tcaaagggtt ggttaatac tcttgggt
1141 gggcagaagg aaggagcccg aggtttatg tttttatca ttaatgtgga ctgaccgag
1201 gaaggattat tacatgttga agatataatt ttgcacatgt ttcaatacat tcagaagtt
1261 cgtcagaag gacctaaga atgggtttc caagagtgc aggacttgaa tgctgtgt
1321 ttttagttt aagacaaaga gaggccacgg ggctatacat ctaagattgc aggaatattt
1381 cattattatc ccctagaaga ggtgctcaca gcggatatt tactggaaat atttagacct
1441 gacttaatag agatggttt cgtatccatc agaccagaaa atgtccgggt tgccatagtt
1501 tctaaatctt ttgaaggaaa aactgatgc acagaagagt ggtatggaa ccagtacaaa
1561 caagaagcta taccggatga agtcatcaag aaatggcaaa atgctgaccc gaatgggaaa
1621 tttaaacttc ctacaaagaa tgaattttt cctacgaaat ttgagatTTT accgttagaa
1681 aaagaggcga caccataccc tgctctt aaggatacag tcatgagcaa acttgggtt
1741 aaacaagatg ataagaaaaaa aaagccgaag gcttgcata actttaattt ttcagccca
1801 tttgctttag tggacccctt gcactgttac atggcctatt tgcacccat gctcccaaa
1861 gactcactca acgagatgc atatgcagca gagctagcag gcttgcacta tgatccca
1921 aataccatct atggatgttca tcttcgtt aaggatcata atgacaagca gccaattttt
1981 ctaaagaaga ttattgagaa aatggctacc ttgagatTTT ataaaaaaag atttggaaatt
2041 atcaaagaag catatatgcg atctcttac aatttccggg ctgaacagcc tcaccagcat
2101 gccatgtact acctccgctt gctgatgact gaagtggcct ggactaaaga tgagttaaaa
2161 gaagctctgg atgatgttac cttccctcgc cttaaaggcct tcataccatca gctccgtca
2221 cggctgcaca ttgaaggccct tctccatgaa aacataacaa agcaggctgc atttagaatt
2281 atgcagatgg ttgaagacac cctcattgaa catgctcata ccaaaccctt cttccaaagt
2341 cagctggttc ggtatagaga agttcagctc cctgacagag gatgggttgc ttatcagcag
2401 agaaatgaag ttccataatc ctgtggcattc gagatataact accaaacaga catgcaaagc
2461 acctcagaga atatgtttt ggagcttcc tgcagatTTT tctcggaaacc ttgctcaac
2521 accctgcgc ccaaggagca gttgggtat atcgcttca gggggccacg tcgagctaat
2581 ggcatacaga gcttgcattt catcatccag tcagaaaagc cacctcacta cctagaaagc
2641 agagtggaaat cttctttaat taccatggaa aagtccatag aggacatgac agaaggagcc
2701 ttccaaaaac acattcaggc attagcaatt cgtcactatg acaaaccaaa gaagctatct
2761 gctgagtttgc ctaaatactg gggagaaatc atctcccgatc aatataattt tgacagagat
2821 aacactgagg ttgcattt aagacactt accaaggaaat atatcatcaa attctacaag
2881 gaaatgttgg cagtagatgc tccaaaggaa cataaggatTTT ccttgcagg
2941 gaaatggatt cttgtctgt tggggagag ttcccatgtc aaaaatgacat aaattttgtca
3001 caagcaccag cttggccaca acctgaatgtt attcagaaca tgaccgaatt caagcgtgg
3061 ctgccactgt ttccccctt gaaaccacat attaacttca tggctgcaaa actctgaaga
3121 ttccccatgc atggaaatg gcaagtggat gcattctga gtctccaga gcctaagaaa
3181 atcatcttgg ccacttaat agttctgtat tcactattag agaaaacaaac aaaaatttgt
3241 caaatgtcat tatgtagaaa tattataat ccaaagtaa (SEQ ID NO:31)

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FIGURE 19A

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IDE (insulin-degrading enzyme, NM_004969)

MYRLAWLLHPALPSTFRSVLGARLPPPERLCGFQKKTYSKMNN
PAIKRIGNHITKSPEDKREYRGLELANGIKVLLMSDPTTDKSSAALDVHIGSLSDPPN
IAGLSHFCEHMLFLGTTKKYPKENEYSQFLSEHAGSSNAFTSGEHTNYYFDVSHEHLEG
ALDRFAQFFLCPLFDESCKDREVNAVDSEHEKNVMNDAWRLFQLEKATGNPKHPFSKF
GTGNKYTLETRPNQEGIDVRQELLKFHSAYYSSNLMAVCVLGRESLDDLTNLVVKLFS
EVENKNVPLPEFPEHFPQEEHLKQLYKIVPIKDIRNLYVTFPIDDLQKYYKSNPGHYL
GHLIGHEGPGSLLSELKSKGWVNTLVGGQKEGARGFMFFIINVDLTEEGLLHVEDIIL
HMFQYIQKLRRAEGPQEWFQECCKDLNAVAFRFKDKERPRGYTSKIAGILHYYPLEEVL
TAEYLLEEFRPDLIEMVLDKLRPENVRAIVSKSFEGKTDRTREEWYGTQYKQEAIPDE
VIKKWQNADLNGKFKLPKTNEFIPTNFEILPLEKEATPYPALIKDTVMSKLWFKQDDK
KKPKKAACLNFEFFSPFAYVDPLHCNMAYLYLELLKDSLNEYAYAAELAGLSYDLQNTI
YGMYLSVKGYNDKQPILLKKIIEKMATFEIIDEKRFEIIKEAYMRSLNNFRAEQPHQHA
MYYLRLLMTEVAWTKDELKEALDDVTLPRLKAFIPQLLSRLHIEALLHGNITKQAALG
IMQMVEDTLIEHAHTKPLLPSQLVRYREVQLPDRGWVFVYQQRNEVHNNGIEIYYQTD
MQSTSENMFLELFCQIISEPCFNTLRTKEQLGYIVFSGPARRANGIQSLRFIIQSEKPP
HYLESRVEAFLITMEKSIEDMTEEAQKHIQALAIRRLDKPKKLSAECAKYWGEIISQ
QYNFDRDNTEVAYLKTLTKEIDIIFYKEMLAVIDAPRRHKVSVHVLAREMDSCPVVGEF
PCQNDINLSQAPALPQPEVIQNMTEFKRGLPLFPLVKPHINFMAKL (SEQ ID NO: 32)

FIGURE 19B

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MYO1A (myosin-1A, NM_005379)

1 cagggaggcct gggctggaag aggccagcaaa agggaaaatc agaagagtg acactggcaa
 61 gaggaggcga gccttttcc cagcttcctt gcaccatgga cagctcccat taagccaccc
 121 ctccatcctg gggccaggac tcttatgccc cattcctgtc aaattgagat ttcatccacc
 181 attctccaag gacagtgaag ttatacccta gttccagtgt tggatcagt ggcctctg
 241 gacatgcctc tcctggaagg ttctgtgggg gtggaggatc ttgtcctcctt ggaacccttg
 301 gtggaggagt cactgctcaa gaatcttcag cttcgctatg aaaacaagga gatttatacc
 361 tacattggga atgtggtgat ctcagtgaat ccctatcaac agcttcccat ctatggcca
 421 gagttcattg ccaaataatca agactatact ttctatgagc tgaagccccca tatctacgca
 481 ttggcaaatg tggcgtacca gtcactgagg gacagggacc gagaccagtg ttcctcattc
 541 acaggcgaga gtggatcagg gaagactgag gccagcaagc tggatgtgc ttatgtggct
 601 gccgtctgtg gaaaaaggaga gcagggtgaac tctgtgaagg agcagctgct acagtcataac
 661 ccagtgtcgg aggcttttg caatgccaag accattcgca acaacaattc ctcccgattt
 721 ggaaaataca tggatattga atttacttc aaggatccc ccctcggtgg tgtcatcaca
 781 aactatctgc ttgagaaaatc ccgatttagt aagcagctca aaggagaaaag gaactccac
 841 atcttctatc agctgctgac tggagcagat gaacagctgc tgaaggccctt gaagcttgag
 901 cgggatacaa ctggctatgc ctatctgaat catgaagttt ccagagtgg tggcatggac
 961 gacgcctcca gcttcaggcgttgtacagat gcaatggcag tgattgggtt ctggaggag
 1021 gagattcgac aagtgttgc ggtgacatcc atgggtctaa agctggggaa cgtgttgggt
 1081 gctgtatgagt tccaggccag tgggataccat gcaagtggca tccgtatgg gagaggtgtt
 1141 cgggagattt gggagatgtt gggcttgaat tcagaagaag tagagagagc ttgtgtctg
 1201 aggaccatgg aaacagccaa gggaaagggtt gtcactgcac tgaatgttat gcaggctcag
 1261 tatgctcggg acgccttgc taagaacatc tacagccgc tctttgactg gatagtgaat
 1321 cgaatcaatg agagcatcaa ggtggcattt gggaaaaga agaaggtaat gggagtccctt
 1381 gatatctacg gttttgagat attagaggat aatagctttt agcaattttt gatcaactac
 1441 tgcaatgaga agctgcagca ggtgttcata gagatgaccc tggaaagaaga gcaagaggaa
 1501 tataagagag aaggcatacc gtggacaaag gtggactact ttgataatgg catcatttgg
 1561 aagcttattt agcataatca gcgaggatc ctggccatgt tggatgagga gtgcctgcgg
 1621 cctgggttgg tcagtgactc cacttccta gcaaagctga accagcttctt ctccaagcat
 1681 ggccactacg agagcaaagt caccsagaat gcccagcgatc agatgacca caccatgggc
 1741 ctcagctgtc tccgcatttc ccactatgcg ggcaagggtga catacaacgt gaccagctt
 1801 attgacaaga ataatgaccc actttccga gacctgttgc aggccatgtt gaaaggcccg
 1861 cacccttcc ttcggtcctt gtttccctg ggcaatccta agcaggcattc tctcaaacgc
 1921 ccccccactg ctggggccca gttcaagagt tctgtggcca tcctcatgaa gaatctgtat
 1981 tccaaagagcc ccaactacat caggtgcata aagcccaatg agcatcagca gcgaggtcag
 2041 ttcttctcag acctgggtgc aaccaggctt cggtacctgg gactgctggaa gAACgtacgg
 2101 gtgcgacggg caggctatgc ccaccgcgg ggttatggc ctttcctggaa aaggtaaccga
 2161 ttgctgagcc ggagcacctg gcctcaactgg aatgggggag accgggaagg tggtaaagg
 2221 gtcctgggg agctgagcat gtcctgggg gagctggcctt tggcaagac aaagatctt
 2281 attagaagcc ccaagactct ttttacatc gaagaacaga ggcgcctgag actccagcag
 2341 ctggccacac tcatacagaa gatttaccga ggctggcgatc gcccacccca ctaccaactg
 2401 atgcgaaaga gtcagatctt catctcctt tggtttccgg gaaacatgca aaagaaatgc
 2461 tatggaaaga taaaggcatc cgtgttattt atccaggctt ttgtgaggg gtggaggcc
 2521 cggaaaggattt atcgcaataa tttccgtca gaggctgccc tcaccttggc agatttcattc
 2581 tacaagagca tggtagagaa attctactg gggctgaaga acaatttgcc atccacaaac
 2641 gtcttagaca agacatggcc agccggccccc tacaagtgc tcagcacagc aaatcaggag
 2701 ctgcagcagc ttcttctacca gtggaaatgc aagagggttcc gggatcagct gtcggaaagg
 2761 caggttagaga tcctgaggaa aaagctctgt gccagtgaac tggatcaggaa caagaaggct
 2821 tcataatcccc agagtgtccc cattccattt tggatgtactt acattgggtt gcaagggaaac
 2881 cccaaagctgc agaagctgaa aggccggggag gaggggcctg ttctgtggc agaggccgt
 2941 aagaaggtaa atcggtggccaa tggcaagact tcttcctcctt gaccaaggcc
 3001 catgtgattt tcacagacac caagaatgc caggccaaaa ttgtcattgg gctagacaat
 3061 gtggctgggg tggatgtccac cagcctcaag gatgggtctt ttagcttgc tctgaaatgg
 3121 atgtcatcggtggctccaa gggggacttc ctgctggtaa gcgagcatgt gattgaactg
 3181 ctgacccaaaa ttgttccggc tggatgtggat gccacgcaga ggcagcttac agtcaccgt

FIGURE 20A

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3241 actgagaagt tctcagttag gttcaaggag aacagtgtgg ctgtcaaggt cgtccaggc
3301 cctgcaggtg gtgacaacag caagctacgc tacaaaaaaaaa aggggagtc ttgctggag
3361 gtgactgtgc agtgaggagg gggcaccatg cagagatggc agttgcttc tcctgaacca
3421 gcactaatcc ccctctgccc tcctgtgtgg gaggatctct aaccctctg atcggtggcgc
3481 atggcttggg gattaaacta cccttgaaga ggacccttgt cccaaaccct tcttgttctc
3541 tcctccaaaa gtagcttcct ccaaccgcga gcctctctgc acactaataa aacatgtggc
3601 ttggaaaggt tcaaaaaaaaaaaa (SEQ ID NO:33)

FIGURE 20B

MYO1A (myosin-1A, NM_005379)

PLLEGSVGVEDLVILLEPLVEESLLKNLQLRYENKEIYTYIGNV
ISVNPyQQLPIYGPEFIAKYQDYTFYELKPHIYALANVAYQSLRDRDRDQCILITGE
GSGKTEASKLVMWSYVAAVCGKGEQVNSVKEQLLQSNPVLEAFGNAKTIRNNNSRFG
YMDIEFDKGSPGGVITNYLLEKSRLVKQLKGERNFHFYQLLAGADEQLLKALKL
RDTTGAYLNHEVSVDGMDDASSFRAVQSAMAVIGFSEEEIRQVLEVTSMLVKG
LVADEFQASGI PASGIRDGRGVREIGEMVGLNSEEVERALCSRTMETAKEKVVTALN
MQAQYARDALAKNIYSRLFDWIVNRINESIKVGIGEKKVGMVLDIYGFEILEDNSF
QFVINNYCNEKLQQVFIEMTLKEEQEEYKREGIPWTKVDFDNGIICKLIEHNQRGIL
MLDEECLRPGVVSDSTFLAKLNQLFSKHGHYESKVTQNAQRQYDHTMGLSCFRICHY
GKVTVNTVSFIDKNNDLLFRDQQAMWKAQHPLLRSLSFPEGNPQASLKRPTAGAQ
KSSVAILMKNLYSKSPNYIRCIPNNEHQQRGQFSSDLVATQARYLGLENVRVRRAG
AHRQGYGPFLERYRLLSRSTWPHWNNGDREGVEKVLGELSMSGELAFGKTKIFIRS
KTLFYLEEQRRLRLQQLATLIQKIQYRGWRCRTHYQLMRKSQILISSWFRGNMQKKCY
KIKASVLLIQAFVRGWKARKNYRKYFRSEAALTADFIYKSMVQKFLLGLKNMLPST
VLDKTWPAAPIYKCLSTANQELQQLFYQWKCKRFRDQLSPKQVEILREKLCASELFKG
KASYPQSVPIPFCDYIGLQGNPKLQKLKGGEEGPVLMAEAVKKVNRGNGKTSSRIL
LTKGHVILTDKKSQAKIVIGLDNVAGSVTSLKDGLFLSLHLEMSSVGSKGDFLLV
EHVIELLTKMYRAVL DATAQRQLTVTVTEKFSVRFKENSVAVKVVQGPAGGDNSKLRY
KKGSHCLETVQ (SEQ ID NO: 34)

FIGURE 20C

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CYP2J2 (cytochrome P450 monooxygenase, NM_000775)

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1 gagccatgct cgcggcgatg ggctctctgg cggctgccct ctggcagtg gtccatcctc
61 ggactctcct actgggcaact gtcgccttc tgctcgtgc tgacttctc aaaagacggc
121 gccccaaagaa ctacccgcgg gggccctggc gcctgcctt ccttggcaac ttcttccttgc
181 tggacttcga gcagtcgcac ctggagggtc agctgttgtt gaagaaaatat gggAACCTT
241 ttagcttggaa gcttgggtgac atatctgcag ttcttattac tgcttgccc ttaatcaa
301 aagcccttat ccacatggac caaaaactttg ggaaccgccc cgtgaccctt atgcgaga
361 atatcttaa gaaaaatggaa ttgattatgt caagtggcca ggcattggaa gagcaaagaa
421 ggttcaactct gacagcacta aggaactttg gtttaggaaa gaagagctt gaggaacgca
481 ttcaggagga ggcggcaacac ctcactgaag caataaaaaga ggagaacggg cagccctttg
541 accctcattt caagatcaac aatgcagttt ccaatatcat ttgctccatc accttcggag
601 aacgcttga gtaccaggat agttgggttc agcagctgct gaagttacta gatgaagtca
661 catacttggaa ggcttcaaag acatgccagc tctacaatgt cttccatgg ataatgaard
721 tcctgcctgg acccccccaa actcttca gcaactggaa aaaactgaaa ttgttggttt
781 ctcatcatgt tgacaaaacac agaaaaggatt ggaatctgc agaaaacaaga gactttattt
841 atgcttacat taaaagaaaatg tcaaaagcaca caggcaatcc tacttcaagt ttccatgaag
901 aaaacatcat ctgcagcacc ctggacctct tctttggcgg aaccggagaca acttcaccaa
961 ctctgcgatg ggctctgtt tatatggccc tctaccaga aatccaagaa aaagtacaag
1021 ctgagattga cagagtgtt ggccaggggc agcagccgag cacagccgccc cggagttcca
1081 tgccttacac caatggaaatc atccatgagg tgcagagaat gggcaacatc atccccctga
1141 acgtttccag ggaagtgaca gttgataccat ctttggctgg gtaccacctg cccaaaggta
1201 ccatgatct gaccaatttgc acggcgctgc acagggaccc cacagagtgg gccacccctg
1261 acacatttcaaa tccggaccat tttctggaga atggacatgtt taagaaaagg gaagccttta
1321 tgccttctc aataggaaaatc cgggcatgcc tcggagaaaca gttggccagg actgagctgt
1381 ttatatttctt cacttccctt atgaaaaat ttagcttcaatg gcccccaaaac aatgagaagc
1441 tgagcctgaa gtttagaaatg ggtatcacca tttccccagt cagtcaccgc ctctgcgtt
1501 ttcctcaggat gtaatattgt taagaaaagg agggggcaagg aaagtaagaa gacatggcac
1561 gtgttctgaa accatgggtt tctgctcaga tttgttggga caaaaatgaaa gtgactttca
1621 agaaaagatca gaggaattttg actcagagaa aactagatcc aaatcccaggc tctactgtct
1681 cgtccgaatt agccttggga aaatccat tttatcttcaatg aatttacctt tttatcttagg
1741 agatggaaaatg aggataatgt ttccttccat aaagaaaatg cttgttggaa tcaaaaagaaa
1801 tggtgagttt taagtgggtt gtaaaccata aaacacatca taaaagttct atctataaaaa
1861 aaaaaaaaaa aaaaaa (SEQ ID NO:35)

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FIGURE 21A

CYP2J2 (cytochrome P450 monooxygenase, NM_000775)

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LAAMGSLAAALWAVVHPRTLLLGTVAFLLAADFLKRRRPKNYP
PGPWRLPFLGNFFLVDFEQSHLEVQLFVKKYGNLFSLELDISAVLITGLPLIKEALI
HMDQNFGNRPVTPMREHIFKKNGLIMSSGQAWEQRRFTLTALRNFGGLGKKSLEERIQ
EEAQHLTEAIKEENGQPFDPHFKINNAVSNIICSIITFGERFEYQDSWFQQLLKLLDEV
TYLEASKTCQLYNVFPWIMKFLPGPHQTLFSNWKKLKLKVSHMIDKHRKDWNPAETRD
FIDAYLKEMSKHTGNPTSSFHEENLICSTLDLFFAGTETTSTTLRWALLYMALYPEIQ
EKVQAEIDRVIGQGQQPSTAARESMPYTNavihevqrmgniiplnvpreatvdttlag
YHLPKGTMILTNLTALHRDPTEWATPDTFNPDHFLENGQFKKREAFMPFSIGKRACLG
EQLARTELFIFFTSLMQKFTFRPPNNEKLSLKFMRGITISPVSHRLCAVPQV (SEQ ID
NO:36)

```

FIGURE 21B

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PHYH (phytanoyl-CoA-hydroxylase (Refsum disease), NM_006214)

```

1 gcccgtgcg gtaaatgggg cagaggccgg gaggggtggg ggttccccgc gccgcagcca
61 tggagcagct tcgcgccgc gcccgtctgc agattgttct gggccacctc ggccgcccct
121 cggccggggc tgctcgtagct catcccactt cagggactat ttccctctgcc agtttccatc
181 ctcaacaatt ccagtatact ctggataata atgttctaac cctggaaacag agaaaatttt
241 atgaagaaaa tgggtttota gtaatcaaaa atcttgtaacc tgatgccgat attcaacgct
301 ttccggaatga gtttgaaaaaa atctgcagaa aggaggtgaa accatttagga ttaacagtaa
361 tgagagatgt gaccatttcg aaatccgaat atgctccaag tgagaagatg atcacgaagg
421 tccagaggatt ccaggaagat aaggagctct tcagatactg cactctccc gagattctga
481 aatatgtgga gtgcgttcaact ggacctaata ttatggccat gcacacaatg ttgataaaca
541 aaccccccaga ttctggcaag aagacgtccc gtcacccccgc accaggagac ctgcactatt
601 tcccccttcag gcccagcgtat ctcatcgat ttccatcgat ggcgatggag cacatcagcc
661 ggaacaaacgg ctgtctgggtt gtgcgtcccg gcacacacaa gggctccctg aagccccacg
721 attaccccaa gtgggaggggg ggagttaaaca aaatgttcca cgggatccag gactacgagg
781 aaaacaaggc ccgggtgcac ctggtgatgg agaagggcga cactgttttcc ttccatcctt
841 tgctcatcca cggatcttgtt cagaataaaa cccagggatt ccggaaaggca atttcctgccc
901 atttcggccag tgccgattgc cactacattt acgtgaaggg caccagtcaa gaaaacatcg
961 agaaggaagt tggatggata gcacataaat tctttggagc tggaaatagc gtgaacttga
1021 aggatatttg gatgtttcga gtcgacttg tggaaaggaga aagaaccaat ctttggaaata
1081 gccatctgtc ataactctt caacagaaaa ccaaaaacca acgaaatgtc taaggaaaat
1141 gttttcttaa tgagatgtt taaccccttc tatcacttgtt taaaaggcaga aaacatgtat
1201 caggtactta attgcataga gtttagtttg cagcacaatg gtgttgctt aatggaaaaaa
1261 aaaaacagta aaagtgaat attactgtt taaggaaaac taatttaggg tggcagccaa
1321 taaagggtgt tgggtgtctaa tttaagtgtt aaatcaattt cttcattca gttagcttt
1381 tacccaaagaa gaagtgaatg atttggagct tagggtatgt ttgttatccc ctttctgata
1441 aacccattcc ctaccaattt tatgtcataa gagattttt tcccccaaat ctagaacaat
1501 gtataataca ttcacatcta gtcaaggcga taggaacggcgt gtcatggagt ccaaataaaag
1561 tggatattcc tgctcgg (SEQ ID NO:37)

```

FIGURE 22A

PHYH (phytanoyl-CoA-hydroxylase (Refsum disease), NM_006214)

```

MEQLRAAARLQIVLGHGRPSAGAVVAHPTSGTISSASFHPQQF
QYTLDDNNVLTLEQRKFYEENGFLVIKVLVPDADIQRFRNEFEKICRKEVKPLGLTVMR
DVTISKSEYAPSEKMITKVQDFQEDKELFRYCTLPEILKYVECFTPNIMAMHTMLIN
KPPDSGKKTSRHPLHQDLHYFPFRPSDLIVCAWTAMEHISRNNGCLVLPGTHKGSLK
PHDYPKWEFGGVNMFHGIQDYEENKARVHLVMEKGDTVFHPLLIIHGSGQNKTQGFRK
AISCHFASADCHYIDVKGTSQENIEKEVVGIAHKFFGAENSVNLKDIWMFRARLVKGE
RTNL (SEQ ID NO:38)

```

FIGURE 22B

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CYB5 (cytochrome b5, 3' end, NM_001914)

1 atggcagagc agtcggacga ggccgtgaag tactacaccc tagaggagat tcagaagcac
61 aaccacagca agagcacctg gctgatcctg caccacaagg tgtacgattt gaccaaattt
121 ctggaagagc atcctggtgg ggaagaagtt ttaagggAAC aagctggagg tgacgctact
181 gagaaccttg aggatgtcgg gcactctaca gatgccaggg aaatgtccaa aacattcatc
241 attggggagc tccatccaga tgacagacca aagttaaaca agcctccaga accttaaagg
301 cggtgtttca aggaaactct tatcactact attgattcta gtccagttt gtggaccaac
361 tgggtgatcc ctgccccatc tcgcgtggcc gtgccttga tgtatcgccct atacatggca
421 gaggactgaa cacctccctca gaagtcagcg caggaagagc ctgccttgaa cacggagaa
481 aagaagccat tgctaactac ttcaactgac agaaacccctt acttggaaaac aatgatttt
541 atatatctct ttcttttct tccgacatta gaaacaaaac aaaaagaact gtcctttctg
601 cgctcaaatt ttgcgagtg gtccctttat tcatactt tattttgatg ttcccttaat
661 gtgttaattta cttattataa gcatgatctt taaaaatattt atttggctt taaagt (SEQ

ID NO:39)

FIGURE 23A

CYB5 (cytochrome b5, 3' end, NM_001914)

MAEQSDEAVKYYTLEEIQKHNSKSTWLILHHKVYDLTKFLEEH
PGGEEVLREQAGGDATENFEDVGHSTDAREMSKTFIIGELHPDDRPKLNKPPEP (SEQ ID
NO:40)

FIGURE 23B

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COXVIb (coxVIb gene, last exon and flanking sequence, NM_001863)

```
1 cctcctggga gggagctgaa gcccgtcgca agactcccggt agtccccacc tctctcagct
61 tccggctgggt agtagttccg cttcctgtcc gactgtggtg tctttgctga gggtcacatt
121 gagctgcagg ttgaatccgg ggtgcctta ggattcagca ccatggcggaa agacatggag
181 accaaaatca agaactacaa gaccggccct tttgacagcc gcttcccaa ccagaaccag
241 actagaaaact gctggcagaa ctacctggac ttccaccgct gtcagaaggc aatgaccgct
301 aaaggaggcg atatctctgt gtgcgaatgg taccagcgtg tgtaccagtc cctctgcccc
361 acatcctggg tcacagactg ggatgagcaa cgggctgaag gcacgttcc cgggaagatc
421 tgaactggct gcatctccct ttccctctgtc ctccatccctt ctccccaggat ggtgaagggg
481 gacctggtag ccagtgtatcc ccaccccagg atcctaaatc atgacttacc tgctaataaa
541 aactcattgg aaaagtgaaa aaaaaaaaaa aaaaaaaaa (SEQ ID NO:41)
```

FIGURE 24A

COXVIb (coxVIb gene, last exon and flanking sequence, NM_001863)

```
MAEDMETKIKNYKTAPFDSRFPNQNQTRNCWQNYLDFHRCQKAM
TAKGGDISVCEWYQRVYQSLCPTSWVTDWDEQRAEGTFPGKI (SEQ ID NO:42)
```

FIGURE 24B

1 gttttttttt ttttaccccc cttttttatt tattatTTTT ttgcacattg agcggatcc
 61 tgggaacgag agaaaaaaaga aacccaaact cacgcgtgca gaagatctcc ccccccctcc
 121 cctcccttcc tccctttttt cccctccccca ggagaaaaaaag acccccaagc agaaaaaaagt
 181 tcaccttggg ctcgtttttt tcttgeata ttttttgggg gggcaaaaact ttgagggggt
 241 gatTTTTTTT ggcttttctt cctccttcat ttttcttcca aaattgtgc tggtgggtga
 301 aaaaaaaaaatg ccgcagctga acggcggtgg aggggatgac cttaggcgca acgacgaact
 361 gatttccttc aaagacgagg gcgaacagga ggagaagagc tccgaaaact cctcgccaga
 421 gagggattta gctgatgtca aatcgctct agtcaatgaa tcagaaaacga atcaaaaacag
 481 ctccctccgat tccgaggcggy aaagacggcc tccgcctcg tccgaaaagtt tccgagacaa
 541 atccccgggaa agtttggaa aagcggccaa gaggcaagat ggagggtctt ttaaggggccc
 601 accgtatccc ggctaccctt tcatacatgat ccccgacctg acgagccct acctcccaa
 661 cggatcgctc tcqcccacccg cccgaaccta tctccagatg aaatggccac tgcttgatgt
 721 ccaggcgagg agcctccaga gtagacaagc cctcaaggat gcccggtccc catcaccggc
 781 acacattgtc tctaacaaag tgccagtggt gcagcaccc caccatgtcc acccccttcac
 841 gcctcttatac acgtacagca atgaacactt cacgcccggg aaccacaccc cacacttacc
 901 agccgacgta gaccccaaaa caggaatccc acggcctcg caccctccag atatatcccc
 961 gtattaccca ctatcgctg gcaccgttagg acaaattcccc catccgctag gatggtagt
 1021 accacagcaa ggtcaaccag tgtaccaat cacgacagga ggattcagac accccctaccc
 1081 cacagctctg accgtcaatg cttccgtgtc caggttccct ccccatatgg tcccaccaca
 1141 tcatacgcta cacacgacgg gcattccgca tccggccata gtcacaccaa cagtcaaaca
 1201 ggaatcgltcc cagagtgtatg tcggctcaact ccatagttca aagcatcagg actccaaaaa
 1261 ggaagaagaa aagaagaagc cccacataaa gaaacctttaatgattcattca tgggttatat
 1321 gaaggaaatg agagcaaagg tcgttagctga gtgcacgttg aaagaaaagcg cggccatcaa
 1381 ccagatccctt gggcgggaggt ggcatgcact gtccagagaa gagcaagcga aataactacga
 1441 gctggccccc aaggagcgcac agcttcatat gcaactgtac cccggctggg cccgcgcccc
 1501 taactatgga aagaagaaga agaggaaaag ggacaagcag cccggagaga ccaatgaaca
 1561 cagcgatgtt ttcctaaatc cttgccttcc acttcctccg attacagacc tcagcgctcc
 1621 taagaaaatgc cgagcgcgtc ttggccttga tcaacacaaat aactggtgcg gcccggcc
 1681 gagaaaaaaa aagtgcgttc gctacataca aggtgaaggc agctgcctca gcccaccctc
 1741 ttcagatgga agcttactag attgccttcc cccctccccg aacctgttag gctccccctcc
 1801 ccgagacgcc aagtccacaga ctgagcagac ccagcctctg tgcgtgtccc tgaagccccga
 1861 cccctggcc cacctgtcca tgatgcctcc gccacccggc ctcctgctcg ctgaggccac
 1921 ccacaaggcc tccgcctct gtcggcaacgg gggccctggac ctgccccccag cccgtttgca
 1981 gcctgccc cccctctcat caattgcaca gccgtcgact tcttggttac attcccacag
 2041 ctccctggcc gggacccagc cccagccgct gtcgctcgatc accaagtctt tagaatagct
 2101 ttagcgctgt gaaccccgct gctttgttta tggtttgtt tcactttct taatttggcc
 2161 cccaccccca ccttggaaagg ttttggggg tactcttta attttgtcc atgtggctac
 2221 attagttgtat gtttattcgag ttcattggtc aatatttgcac ccattttat ttcaatttct
 2281 ccttttaat atgttagatga gagaagaacc tcatgattgg taccaaaatt ttatcaaca
 2341 gctgtttaaa gtcttggtag cgtttaaaaaa atatataat atacataact gttatgttagt
 2401 tcggatagct tagttttaaa agactgatta aaaaacaaaaaaa aaaa (SEQ ID NO:43)

FIGURE 25A

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TCF4 (NM_030756)

MPQLNGGGDDILGANDELISFKDEGEQEEKSSSENSSAERDLADVKSSLVNESETQNSSSDSEAERRPPRSESFRDKSRESLEEAAKRQDGGLFKGPPYGYPFIMIPDLTSPYLPNGSLSPARTYLQMKWPLLDVQAGSLQSRALKDARSPSPAIVSNKVPVVQHPHHVHPLTPLITYSNEHFTPGNPPPHLPADVDPKTGIPRPPHPFDISPYYPLSPGTVGQIPHPLGWLVPQQGQPVYPITGGFRHPYPTALTNASVSRFPPHMVPHHTLHTTGIPHAIVTPTVKQESSQSDVGSLSKHQDSKKEEEKKKPHIKKPLNAFMLYMKEMLRAKVVAECTLKESAAINQILGRRWHALSREEQAKYYELARKERQLHMQLYPGWSARDNYGKKKRKRDQKQGETNEHSECFLNPCLSLPPITDLSAPKKCRARFGLDQQNNWCGPCRRKKKCVRYIQGEGSCLSPSSDGSLLDSPPPSPNLLGSPPRDAKSQTEQTQPLSLSLKPDPLAHLSMSMPPPALLAEATHKASALCPNGALDLPPAALQPAAPSSIAQPSTSWLHSSSLAGTQPQPLSLVTKSLE (SEQ ID NO:44)

FIGURE 25B

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CAD17 (liver-intestine cadherin, NM_004063)

1 agggagtgtt cccgggggag atactccagt cgttagcaaga gtctcgacca ctgaatggaa
 61 gaaaaggact tttaaccacc attttgtac ttacagaaaag gaatttgaat aaagaaaaact
 121 atgatacttc aggcccacatct tcactccctg tgccttctta tgctttattt ggcaactggaa
 181 tatggccaag aggggaagtt tagtgaccc ctgaaaccca tgacatttc tatttatgaa
 241 gccaagaac cgagtcaaatt tatattccag tttaaggcca atcctcctgc tgcgtacttt
 301 gaactaaactg gggagacaga caacatattt gtgatagaac gggagggact tctgtattac
 361 aacagagcct tggacagggaa aacaagatct actcacaatc tccagggtgc agccctggac
 421 gctaattggaa ttatagtggaa gggtccagtc cctatcacca tagaagtgaa ggacatcaac
 481 gacaatcgac ccacgtttct ccagtcaaag tacgaaggct cagtaaggca gaactctcgc
 541 ccaggaaagc ctttcttgc tgtaatgcc acagacctgg atgatccggc cactcccaat
 601 ggccagctt attaccagat tgcatccag ctccccatga tcaacaatgt catgtacttt
 661 cagatcaaca aaaaaacggg agccatctt cttaccggag agggatctca ggaattgaat
 721 cctgctaaga atccttccta taatctggg atctcagtga aggacatggg aggccagagt
 781 gagaattcct tcaatgtatac cacatctgtg gatcatatag tgacagagaa tatttgaaa
 841 gcacccaaac ctgtggagat ggtggaaaac tcaactgatc ctcaccccat caaaatcact
 901 caggtgcggg ggaatgatcc cggtgccaaa tattccttag ttgacaaaga gaagctgcca
 961 agattccat ttcaattga ccaggaaggg gatatttacg tgactcagcc cttggaccga
 1021 gaagaaaagg atgcataatgt tttttatgca gttgcaaaagg atgagtacgg aaaaccactt
 1081 tcatatccgc tggaaattca tgtaaaagtt aaagatatta atgataatcc acctacatgt
 1141 ccgtcaccag taaccgtt tgaggtccag gagaatgaac gactggtaa cagtatcggg
 1201 acccttactg cacatgacag ggttggaaaac aatactgcca acagtttctt aaactacagg
 1261 attgtggagc aaactccaa acttccatg gatggactct tcataatcca aacctatgct
 1321 ggaatgttac agttagctaa acagtccctg aagaagcaag atactcctca gtacaactta
 1381 acgatagagg tgcgtgacaa agatttcaag acccttggat ttgtgcaaat caacgttatt
 1441 gatatacatg atcagatccc catcttggaa aaatcagatt atggaaaacct gacttttgct
 1501 gaagacacaa acattgggtc caccatctt accatccagg ccactgatgc tgatgagcca
 1561 ttactgggaa gttctaaaat tctgtatcat atcataaaagg gagacagtga gggacgcctg
 1621 ggggtgaca cagatccca taccacacc ggtatgtca taataaaaa gcctttgtat
 1681 ttgtgaaacag cagcttttc caacattgtg ttcaaaaggaaaatcctga gcctctagtg
 1741 ttgtgtgaa agtacaatgc aagtttttgc ccaaggatc cgttattgt gacagatgtg
 1801 aatgaagcac ctcattttc ccaacacgtt ttccaaggca aagtcaatgt ggttagtgc
 1861 ataggacta aagtgggaa tgcgtactgcc aaggatccag aaggcttggaa cataagctat
 1921 tcactgaggg gagacacaaag aggttggctt aaaatttggacc acgtgactgg tgagatctt
 1981 agtggggctc cattggacag agaagccggaa agtccatatc ggtacaatgt ggtggccaca
 2041 gaagtgggg ggttccctt gagctctgtg tcagaggatcc acctgatccct tatggatgtg
 2101 aatgacaacc ctcccaggat agccaaggac tacacgggt tttttttcttgc ccatccctc
 2161 agtgcacccgt gaagtctcat ttccggggctt actgatgtatc atcagactt atttccgggt
 2221 cccccatataa cattttccct cggcaggatggaa agcttacaaa acgactgggaa agtttccaaa
 2281 atcaatggta ctcatgccc actgttacc aggcacacag agtttgggaa gagggaggtat
 2341 gtcgttgc tccgcataa tgatgggggtt cggccacccct tggaggcat ttttttttgc
 2401 ccagttacat tctgcaggat tggaaaggg agtttggctt gggcaggcagg tcaccagact
 2461 gggataccctt ctgtggggat ggcaggatggt atactgatgc ccacccttctt ggtgattggt
 2521 ataatttttag cagttgtgtt tattccatataa aagaaggata aaggcaaaaga taatgttggaa
 2581 agtgcataag catctgaatg caaacctctg agaagctgaa ttgaaaagg aatgtttggaa
 2641 ttatataatgc aagtgttattt tcagcaacaa ccatctcattt ctattactt tcatctaacg
 2701 tgcattataa tttttttaaaat agatattccc tcttgcctt taatatttgc taaatatttgc
 2761 ttttttgggg tggaggatcttgc ctctgtgc caggctggag tacaggatggt tgatcccaggc
 2821 tcactgcaac ctccgcctcc tgggttcaca tgattcttgc gctcagctt cctaagtgc
 2881 tgggtttaca ggcacccacc accatgccc gctaattttt gtattttaa tagagacggg
 2941 gtttcgcattt ttggccaggc tggcttgc tccctgacgt caagtgtatc gctgccttgc
 3001 gtcctccaaat acaggcatga accactgcac ccacctactt agatatttca tgcgtatag
 3061 acatttagaga gatttttcat tttccatga cattttccctt ctctgcaaat ggcttagcta

FIGURE 26A

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3121 cttgtgtttt tccctttgg ggcaagacag actcattaaa tattctgtac atttttctt
3181 tatcaaggag atatatcagt gttgtctcat agaactgcct ggattccatt tatgttttt
3241 ctgattccat cctgtgtccc cttcatcctt gactccttg gtatttcact gaattcaaa
3301 catttgtcag agaagaaaaa cgtgaggact cagaaaaat aaataaataa aagaacagcc
3361 tttccctta gtattaacag aaatgttct gtgtcattaa ccatctttaa tcaatgtgac
3421 atgttgctct ttggctgaaa ttcttcaact tggaaatgac acagaccac agaagggtt
3481 caaacacaac ctactctgca aaccttggta aaggaaccag tcagctggcc agattcctc
3541 actacctgcc atgcatacat gctgcgcatttcttcat tcgtatgtta gtaaagttt
3601 ggttattata tatttaacat gtggaaagaaa acaagacatg aaaagagtgg tgacaaatca
3661 agaataaaca ctgggtgttag tcagtttgt ttgttaa (SEQ ID No:45)

FIGURE 26B

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CAD17 (liver-intestine cadherin, NM_004063)

MILQAHLHSLCLLMLYLATGYGQEGKFSGPLKPMTFSIYEGQEP
SQIIFQFKANPPAVTFELTGETDNI FVIEREGLLYYNRALDRETRSTHNLQVAALDAN
GIIVEGPVPITIEVKDINDNRPTFLQSKYEGSVRQNSRPGKPFYVNATLDDPATPN
GQLYYQIVIQLPMINNVMYFQINNKTAISLTREGSQELNPARKPSYNLVISKDMGG
QSENSFSDTTSVDI IVTENIWKAPKPVEMVENSTDHPPIKITQVRWNDPGAQYSLVDK
EKLPRFPFSIDQEGDIYVTQPLDREEKDAYVFYAVAKDEYGKPLSYPLEIHVKVDIN
DNPPTCPSPTVFEVQENERLGNSIGTLTAHDRDEENTANSFLNYRIVEQTPKLPMDG
LFLIQTYAGMLQLAKQSLKKQDTPQYNLTIEVSDKFTLCFVQINVIDINDQIPIFE
KSDYGNLTLAEDTNIGSTILTIQATDADEPFTGSSKILYHIKGDSSEGRLGVDTDPTH
NTGYVIIKKPLDFETAAVSNIVFKAENPEPLVFGVKYNASSFAKFTLIVTDVNEAPQF
SQHVFQAKVSEDAIGTKVGNVTAKDPEGLDISYSLRGDTRGWLKIDHVTGEIFSVA
LDREAGSPYRVQVVATEVGGSSLSSVSEFHILLMDVNDNPPRLAKDYTGGLFFCHPLSA
PGSLIFEATDDDQHLFRGPHTFSLGSGSLQNDWEVSKINGTHARLSTRHTEFEEREY
VVLIRINDGGRPPLEGIVSLPVTFCSCEGSCFRPAGHQTGIPTVGMAGILLTLLV
IGIILAVVFIRIKKDKGKDNEAQASEVKPLRS (SEQ ID NO:46)

FIGURE 26C

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CLDN15 (claudin 15, NM_014343)

```

1 ctcgtcaaca gctgccgcgc gcaggcttag ctcattcctc tgacctgcca ggaaggcagag
61 agaccacag agcaggaggg aggcataaa tggagacgga cctgagcccg aggaagaggg
121 aggcagaggg tgaggctgat tccaccccaag cctgcctgga caaccctcct tagccgcagc
181 ccctccagt tccctagggg ttctgcccct ccccccctct ggggcaccag cccccccaggg
241 tcctgcatacc caccatgtcg atggctgtgg aaaccttgg ctcttcatg gcaactgtgg
301 ggctgctgat gctgggggtg actctgccaa acagctactg gcgagtggtcc actgtgcacg
361 ggaacgtcat caccaccaac accatcttcg agaacctctg gtttagctgt gccaccgact
421 ccctggcggt ctacaactgc tggagttcc cgtccatgct gcccctctct gggtatattc
481 aggcctgcgg ggcactcatg atcacccgcca tcctccttggg ctccctcgcc ctcttgctag
541 gcatagcggg cctgcgtgc accaacattt ggggccttgg gctctccagg aaagccaagc
601 tggcggccac cgcaggggcc ctccacattc tggccggatg ctgcgggatg gtggccatct
661 cctggtaacgc cttcaacatc acccgggact tcttcgaccc cttgtacccc ggaaccaagt
721 acgagctggg ccccgccctc tacctgggtt ggagcgcctc actgatctcc atcctgggtg
781 gcctctgcct ctgctccggc tgctgctgctg gctctgacga ggacccagcc gccagcgccc
841 ggcggcccta ccaggctccc gtgtccgtga tgcccgtcgc cacctcgac caagaaggcg
901 acagcagctt tggcaaatac ggcagaaaacg cctacgtgtt gtagctctgg cccgtgggccc
961 ccgctgtctt cccactgccc caaggagagg ggacctggcc gggggccatt cccctatagt
1021 aacctcagggg gccggccacg ccccgctccc gttagcccccgc cccggccacg gccccgtgtc
1081 ttgcactctc atggcccccctc cagggcaaga actgctctt ggaagtcgca tatctccct
1141 ctgaggctgg atccctcatc ttctgaccct gggttcttgg ctgtgaaggg gacgggtgtcc
1201 ccgcacgttt gtattgtgtt taaatacatt catataaaaa tgcatattgt gaccgttc
(SEQ ID NO:47)

```

FIGURE 27A

CLDN15 (claudin 15, NM_014343)

```

MSMAVETFGFFMATVGLMLGVTLPSYWRVSTVHGNVITNTI
FENLWFSCATDSLGVYNCWEFPSMLALSGYIQACRALMITAILLGFLGLLLGIAGLRC
TNIGGLELSRKAKLAATAGALHILAGICGMVAISWYAFNITRDFFDPLYPGTKYELGP
ALYLGWSASLISILGGLCLCSACCCGSDEDPAASARRPYQAPVSMPVATSDQEGDSS
FGKYGRNAYV (SEQ ID NO:48)

```

FIGURE 27B

CFTR (chloride channel, NM_000492)

1 aatttggaaagc aaatgacatc acagcaggtc agagaaaaag ggttgagcgg caggcaccca
61 gagtagtagg tctttggcat taggagcttg agcccgacacg gcccctagcag ggaccggc
121 gccccgagaga ccatgcagag gtcgcctctg gaaaaggcca gcgttgcctc caaactttt
181 ttcaagctgga ccagaccaat tttaggagaaa ggatacagac agcgccctgga attgtcagac
241 atataccaaa tcccttctgt tgattctgct gacaatctat ctgaaaaatt ggaaagagaa
301 tgggatagag agctggcttc aaagaaaaat cctaaactca ttaatgcct tcggcgatgt
361 ttttctgga gatttatgtt ctatggaatc tttttatatt tagggaaatg caccaaagca
421 gtacagccctc tcttacttggg aagaatcata gcttccatag acccgataa caaggagggaa
481 cgctctatcg cgatttatct aggcataggc ttatgccttc tctttattgt gaggacactg
541 ctcctacacc cagccatttt tggccttc catcattggaa tgcagatgag aatagctatg
601 tttagtttga tttataagaa gactttaaag ctgtcaagcc gtgttctaga taaaataagt
661 attggacaaac ttgttagtct ctttccaac aacctgaaca aatttgcata aggacttgc
721 ttggcacatt tcgtgtggat cttctgttgc caagtggcac tcctcatggg gctaattctgg
781 gagttgttac aggcgtctgc gatgttggaa cttgggttcc tgatagtcc tgccttctt
841 caggctgggc tagggagaat gatgttggaa tacagagatc agagagctgg gaagatcagt
901 gaaagacttgc tgattacctc agaaatgatt gaaaatatcc aatctgttac ggcataactgc
961 tgggagaagaa caatggaaaaa aatgattgaa aacttaagac aaacagaact gaaactgact
1021 cggaaaggcag cctatgttag atacttcaat agctcagcc tcttcttctc agggttctt
1081 gtgggtttt tatctgtctc tccctatgca ctaatcaaag gaatcatcct ccggaaaata
1141 ttcaccacca tctoattctg cattgttctg cgcatggcgg tcactcggca atttccctgg
1201 gctgtacaaa catggatgaa ctctcttgc gcaataaaca aaatacagga tttcttacaa
1261 aagcaagaat ataagacatt ggaatataac ttaacgacta cagaagtagt gatggagaat
1321 gtaacagcct tctgggagga gggatttggg gaattatttgc agaaagcaaa acaaaacaat
1381 aacaatagaa aaacctctaa tggtgatgac agccttctc tcagtaattt ctcacttctt
1441 ggtactccctg tcctgaaaaga tattaatttgc aagatagaaa gaggacagtt gttggcggtt
1501 gctggatcca ctggagcagg caagacttca ctctaatgc tgattatggg agaacttggag
1561 ctttcagagg gtaaaaattaa gcacagtggaa agaatttcat tctgttctca gtttccctgg
1621 attatggctg gcaccattaa agaaaatatac atctttgggt tttctatgaa tgaatataaga
1681 tacagaagcg tcatcaaagc atgccaacta gaagaggaca tctccaagtt tgcagagaaa
1741 gacaatatacg ttcttgaga aggtggaaatc acacttgatg gaggtaacg agcaagaatt
1801 tcttttagcaa gagcagtata caaagatgct gatttgcattt tattagactc tccctttgg
1861 taccttagatg ttttacaga aaaagaata ttgaaaagct gtgtctgtaa actgtatgct
1921 aacaaaacta ggattttggc cacttctaaa atggAACATT taaagaaagc tgacaaaata
1981 ttaattttga atgaaggtag cagctatttt tatgggacat tttcagaact cccaaatcta
2041 cagccagact tttagctcaa actcatggc tttgatttctc tcgaccaatt tagtgcagaa
2101 agaagaaatt caatccaaac tgagaccta caccgtttct cattagaagg agatgtctt
2161 gtctcctgga cagaaacaaa aaaacaatct tttaaacaga ctggagagtt tggggaaaaaa
2221 aggaagaatt ctattctcaa tccaaatcaac tctatacgaa aattttccat tgcacaaag
2281 actcccttac aaatgaatgg catcgaagag gattctgtatc agcctttaga gagaaggctg
2341 tccttagtac cagattctga gcaggagag ggcataactgc ctcgcacatcag cgtgtatc
2401 actggcccca cgcttcaggc acgaaggagg cagtctgtcc tgaacctgtat gacacactca
2461 gttaaaccaag gtcagaacat tcaccggaaag acaacacgcat ccacacgaaa agtgcactg
2521 gccccctcagg caaaacttgc tgaactggat atatattcaaa gaaggatcattc tcaagaaact
2581 ggcttggaaa taatgtgaa aattaacgaa gaagacttac agaggatgcct ttttgcatt
2641 atggagagca taccagcagt gactacatgg aacacatacc ttgcataat tactgtccac
2701 aagagcttac ttgttgcatttgc ttagtatttttgc ttagtgcata ggtggctgt
2761 tctttgggtg tgctgtggct ctttggaaac actccttctc aagacaaagg gaatgtact
2821 catagtagaa ataacagctc tgcaatccatc tgcagtgtattt atcaccatcgc ttagtgc
2881 tacatccatc tgggatgtac cgcacacttgc ctgtctatgg gatttctcag aggtctacca
2941 ctggtgcatc ctctaatcactc agtgcggaaa attttacacc acaaaatgtt acattctgtt
3001 cttcaagcactc ttagtgcac cttcaacacg ttagaaagcag gtgggatttctc taatagattc
3061 tccaaagata tagcaatccatc ggtgaccccttgccttca ccatatttgc tttcatccat

FIGURE 28A

3121 ttgttattaa ttgtgattgg agctatagca gttgtcgag tttacaacc ctacatctt
 3181 gttgcaacag tgccagtat agtggcttt attatgttga gagcatattt cctccaaacc
 3241 tcacagcaac tcaaacaact ggaatctgaa ggcaggagtc caatttcac tcatcttg
 3301 acaagcttaa aaggactatg gacacttcgt gccttcggac ggagcctta ctttggaaact
 3361 ctgttccaca aagctctgaa tttacatact gccaacttgt tcttgtacct gtcaacactg
 3421 cgctggttcc aaatgagaat agaaatgatt ttgtcatct tcttcattgc tgtaacctt
 3481 atttccatt taacaacagg agaaggagaa ggaagagttt gtattatcct gacttttagcc
 3541 atgaatatca tgagtacatt gcagtggct gtaaactcca gcatacatgt ggatagttt
 3601 atgcgatctg tgagccgagt cttaagttc attgacatgc caacagaagg taaacctacc
 3661 aagtcaacca aaccatacaa gaatggccaa ctctcgaaag ttatgattat tgagaattca
 3721 cacgtgaaga aagatgacat ctggccctca gggggccaaa tgactgtcaa agatctcaca
 3781 gcaaaataca cagaagggtt aaatggccata ttagagaaca tttccttctc aataagtcc
 3841 ggccagaggg tgggcctt gggagaact ggatcaggga agagttactt gttatcagct
 3901 ttttgagac tactgaacac tgaaggagaa atccagatcg atgggtgttc ttggattca
 3961 ataactttgc aacagtggag gaaagcctt ggagtgatac cacagaaagt atttatttt
 4021 tctggAACAT ttagaaaaaa cttggatccc tatgaacagt ggagtgatca agaaatatgg
 4081 aaagttgcag atgaggtttt gctcagatct gtgatagaac agtttctgg gaagcttgac
 4141 tttgtcctt tggatgggg ctgtgtccta agccatggcc acaagcagtt gatgtcctt
 4201 gctagatctg ttctcagtaa ggcgaagatc ttgctgttgc atgaacccag tgctcattt
 4261 gatccagtaa cataccaaat aattagaaga actctaaaac aagcatttgc tgattgcaca
 4321 gtaattctct gtgaacacag gatagaagca atgctgaaat gccaacaatt tttggtcata
 4381 gaagagaaca aagtgcggca gtacgattcc atccagaaaac tgctgaacga gaggagcctc
 4441 ttccggcaag ccatcagccc ctccgacagg gtgaagctt tttcccaccc gaactcaagc
 4501 aagtgcagttt ctaagcccc gattgtctt ctgaaagagg agacagaaga agaggtgcaa
 4561 gatacaaggc ttttagagagc agcataaaatg ttgacatggg acatttgc tttggattgg
 4621 agctcggtttt acagtcaccc catgaaattt gacgtgttgc aacagttacc tctgcctc
 4681 aaaacaagga tgaattaatg tttttttaa aaaagaaaaca tttggtaagg ggaatttgg
 4741 acactgatat gggcttttat aatggctt ctggcaatag tcaaattgtt tgaaaggatc
 4801 ttcaaatct tgaagattt ccacttgtt tttgcaagcc agattttctt gaaaaccctt
 4861 gccatgtgtt agtaatttggaa aaggcagtc taaatgtcaa tcagcttagt tgatcagctt
 4921 attgtctatg gaaactcgat aattgtatg ttggagaag aactgaaatc atacttctt
 4981 gggttatgt taagtaatga taactggaaa cttcagcggt ttatataagg ttgtattctt
 5041 ttttctctcc tctccccatg atgttttagaa acacaactat attgtttgtt aagcattcca
 5101 actatctcat ttccaagcaa gtattttagaa accacaggaa ccacaagact gcacatcaaa
 5161 atatggccca ttcaacatct agtgagcagt caggaaagag aacttccaga tcctggaaat
 5221 cagggttagt attgtccagg tctacaaaaa atctcaatat ttcatgataat cacaatacat
 5281 cccttacctg ggaaagggtt gttataatct ttacagggg acaggatggg tcccttgatg
 5341 aagaagtttga tatgcctttt cccaaactcca gaaagtgaca agctcacaga cctttgaact
 5401 agagtttagc tggaaaagta tggatgtca aattgtcaca ggacagccct tctttccaca
 5461 gaagctccag gtagagggtt tggatgttgc taggcattgg gcaactgtggg tagacacaca
 5521 tgaagtccaa gcatttagat gtatagggtt atgggtgtt gttttcaggc tagatgtatg
 5581 tacttcatgc tggatgttgc aagagagaat gagagacaca ctgaagaaggc accaatcatg
 5641 aatttagttt atatgtttt gttttataat ttgtgttgc aaaaattttt ctcttaggaaa
 5701 tattttatgg aataatgttt caaacatata ttacaatgtt gtatttttaaa agaatgatta
 5761 tgaatttacat ttgttataaaa taatttttattt atttggaaata ttgactttt atggacttag
 5821 tattttatgg aaatattatg ttgggggggg gacaggggag aaccttagggt gatattaacc
 5881 agggggccatg aatcacctt ttggatgttgc ggaagccctt gggctgtatcg agttgttgc
 5941 cacagctgtt tgattccca gggccatg cctttagat gcaatgttgc agaagatggt
 6001 accaccagtc tgactgtttc catcaagggt acactgcctt ctcaactccaa aactgactct
 6061 taagaagact gcattatatt tattactgtt agaaaatatc acttgcataat aaaatccata
 6121 catttgcgtt (SEQ ID NO:49)

FIGURE 28B

CFTR (chloride channel, NM_000492)

MQRSPLEKASVVS KLFFSWTRPI LRKG YRQRLE LSDIYQIPSVD
SADNLSEKLEREW DRELASKKNPKLINALRR CFFWR FMFYG IFLGEVT KAVQPLL
GRIIAS YDPDNKEERSIAIYL GIGLCLLFIVRTLLLH PAIFGLHH IGMQM RIAMFSLI
YKKTLKLSSRVLDKISIGQLVSLLSNNLNKFDEGLALAHFVWIAPLQVALLMGLI WEL
LQASAF CGLGFLIVLALFQAGLGRMMMKYRDQRAGKISERLVITSEMIENIQSVKAYC
WEEAMEKMIENLRQTELKLTRKAAYVRYFNSSAFFSGFFVVFLSVLPYALIKGIILR
KIFTTISFCIVL RMAVTRQFPWAVQTWYDSDLGAINKI QDFLQKQEYKTLEYNLTTEV
MENVTA FWEEGF GELFEKAKQNNNNRKTSNGDDSLFFSNFSLLGTPVLKDINF KIER
QLLAVAGSTGAGKTSLLMMIMGELEPSEGKIKHSGRISFC SQFSWIMP GTIKENI IF
VSYDEYRYRSVIKACQLEEDISKFAEKDNIVLGEGGITLSGGQRARISLARAVYKDA
LYL LDSPFGYLDVLTEKEI FESCVC KLMANKTRILVTSKMEHLKKADKILNEGSS
FYGTFS ELQNLQPDFSSKLMGCDSF DQFSAERRNSIL TETLH RFSLEG DAPV SWTET
KQSFKQTGEFGEKRKNSI LN PINSIRKFSIVQKTPLQMN GIEEDSDEPLERRLSLVP
SEQGEA ILPRISVISTGPTLQARRQS VLN LMTHSVNQGQNIHRKTTA STRKVSLAP
ANLTEL DIYSRRRLSQETGLEISEEINEEDLKECLFDDMESI PAVTTWNTYLRYITVH
SLIFVLIWCLVI FLAEVAASLVVLWLLGNTPLQDKGNSTHSRNNSYAVI ITSTSSYY
FYIYVGVADTLLAMGF FRGLPLVHTLITVSKILHHKMLHSVLQAPMSTLNTLKAGGI
NRFSKDIAI LDDLLPLTIFDFI QLLLIVIGAI AVVAVLQPYIFVATVPVIVAFIMLR
YFLQTSQQLKQLESEGRSPIFTHLVTSLKGLWTLRAFGRQPYFETLFHKALNLHTAN
FLYLS TLRFQMR IEMIFV IFFIAVTFISILTGE GEGERVGI ILT LAMNIMSTLQWA
NSSIDVDSL MRSVSRVFKFIDMPTEGKPTKSTKP YKNGQLSKVMII ENSHVKKDDIW
SGGQMTVKDLTAKYTEGGNAILENISFSI SPGQRVGLLGRTGSGKSTLLSAFLRLLN
EGEIQIDGVSWDSITLQQWRKA FGVI PQKVFIFSGTFRK NLD PYEQWS DQE IWKVAD
VGLRSVIEQFP GKLD FV LVDGGCVL SHGHK QLM CLARS VLS KAKILL DEPSA HLD
TYQIIRRTLQQA FADCTVILCEHRIEAMLECQ QFLVIEENKVRQYDSI QKLL NERSL
RQAISPSDRV KLFPHRNSSKCKSKPQIA ALKEETEEEVQDTRL (SEQ ID NO: 50)

FIGURE 28C

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H2R (histamine H2 receptor, NM_022304)

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1 ctcctgcctt ccactgactc cagagaggga gatccccagt acttgactcc atcacgcaga
61 tgggagcagg caccagctat ggagagggat acagctgcgt ctccacatga cccatccctgc
121 atgacaccaa agccaccgcc agacagtgc tcggattcta tgcaaaaacct gggaaagcgga
181 gacctacccc agccccggga ggaagctagc tcttcagggg accgtctgag gactggagtt
241 tcatccatga acctggcttc gaggccttgc ttttctctt tcttcattca tattcattcc
301 caacaccccta gaagggtttt cttaatttat ttctagaaaaa gcagcccaga gtcagtcatt
361 gaagccttcc ccaccccttgc gccaaaaaaaaaaaaaaaaaaaaactggac acattttgga
421 tctgttggga gcttggagtc cagtggttgc catagttgtc acattgggag cagagaagaa
481 gcaaccagggg gcccgtatca ggggactgag ccgttagatgc ccaggatggc acccaatggc
541 acagccttcc cttttgcgttgc ggaacttacc gcatgcaaga tcaccatcac cgtggcctt
601 gcggtcctca tcctcatcac cggtgttgc aatgtggtgc tctgttgc cgtggcctt
661 aaccggccggc tccgcaacct gaccaatttgt ttcatctgtc cttggctat cactgacctg
721 ctcctcggcc tcctgggtgtt gcccatttgc gccatctacc agctgttgc caagttggagc
781 tttggcaagg tcttcgttcaaa tatctacacc agcctggatg ttagtgcctg cacagccctcc
841 attcttaacc tcttcgtatg cagcctcgac cggtaactgcg ctgtcatggaa cccactgegg
901 taccctgtgc tggtcacccccc agttcgggtc gccatcttc tggcttaat ttgggttcatc
961 tccattaccc tggcatttttgc tctatccac ctgggggttgc acagcaggaa cgagaccagc
1021 aaggccaatc ataccacccca taagtgcataa gtccagggtca atgaagtgtt cgggctgggt
1081 gatgggctgg tcacccatca cctcccgatca ctgatcatgt gcatcacatca ctaccgcac
1141 ttcaagggtcg cccgggatca ggccaaagagg atcaatcaca tttagtgcctg gaaggcagcc
1201 accatcaggg agcacaaaagc cacagtgaca ctggccggcc tcatgggggc cttcatcata
1261 tgctggtttc cttacttccac cgcgtttgtt taccgtgggc tgagagggga ttagtgcac
1321 aatgagggatgt tagaagccat cggttgcgttgc ctgggctatg ccaactcaggc cctgaacccc
1381 atcctgtatg ctgcgttgcgaa cagagacttc cgcacccgggtt accaacagct cttctgtgc
1441 aggctggcca accgcaactc ccacaaaact tctctgaggtt ccaacgcctc tcagctgtcc
1501 aggacccaaa gcccggaaacc cagggcaacag gaagagaaaac ccctgaagct ccaggtgtgg
1561 agtgggacag aagtacccggc ccccccgggaa gccacagaca ggtaatagcc cttagccattg
1621 gtgcacagga tggggcaat gggaggggat gctactgtatg ggaatgatta agggagctgc
1681 tggcttaggtt gtcgtgggtt atgttctagg aactcttcat gggactttt taaacaccct
1741 cttgtttaat cttcccaacg gcccccaaaatgtagaactta gtcctttt aaaaggagca
1801 cattaaaattt ctcagaggac ttggcaagggg ccgcacagct gggggcat (SEQ ID NO:51)

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FIGURE 29A

H2R (histamine H2 receptor, NM_022304)

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APNGTASSFCLDSTACKITITVVLAVLILITVAGNVVVCLAVG
NRRLRNLTNCFIVS LAITDLLLGLLVL PFSAIYQLSCKWSFGKVF CNIYTS LDVMLC
ASILNLFMISLD RYCAVMDPLRYPVLPV RVVAISL VLWVISITLSFLSIHLGWNS
NETSKGNHTTSKCKVQVNEVYGLVDGLTVFYPLLIMCITYYRIFKVAR DQAKRINH
SSWKAATIREHKATVTLA AVMGAFII CWFPYFTAFVYRGLRGDDAINEVLEAIVLWL
YANSALNPILYAALNRDFRTGYQQQLFC CRLANRNSHKTSLRSNASQLSRTQSREPRQ
EEKPLKLQVWSGTEVTAPQGATDR (SEQ ID NO:52)

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FIGURE 29B

EGFR (NM_005228)

1 gagctagccc cggcgccgc cgccgcccag accggacgac aggccaccc tcgtggcgtcc
 61 gcccagtc cccgcctcgcc gccaacgcca caaccaccgc gcacggcccc ctgactccgt
 121 ccagtattga tcgggagaga cggagcgagc tcttcgggaa gcagcgatgc gaccctccgg
 181 gacggccggg gcagcgctcc tggcgctgt ggctgegctc tgcccgccga gtcgggtct
 241 ggagaaaaag aaagtttgc aaggcacgag taacaagctc acgcagttgg gcactttga
 301 agatcatttt ctcagcctcc agaggatgtt caataactgt gaggtggtcc ttggaaattt
 361 ggaaattacc tatgtgcaga ggaattatga tcttccttc ttaaagacca tccaggaggt
 421 ggctggttat gtcctcattt ccctcaacac agtggagcga attcctttgg aaaacctgca
 481 gatcatcaga gaaaatatgt actacaaaaa ttcttatgcc tttagcagtct tatctaacta
 541 ttagtgcataat aaaaccggac tgaaggagct gcccattgaga aatttacagg aaatctgca
 601 tggcgccgtg cggttcagca acaaccctgc cctgtcaac gtggagagca tccagtggcg
 661 ggacatagtc agcagtgact ttctcagcaa catgtcgatg gacttccaga accacctggg
 721 cagctgccaa aagtgtgatc caagctgtcc caatgggagc tgctggggtg caggagagga
 781 gaactgcccag aaactgacca aaatcatctg tgcccagcag tgctccgggc gctgcgtgg
 841 caagttttttt agtgaactgtt gccacacaacca gtgtgctgca ggctgcacag gccccccgg
 901 gagcgactgc ctggctctgcc gcaaattccg agacgaagcc acgtgcaagg acacctgccc
 961 cccactcatg ctctacaacc ccaccacgtt ccagatggat gtgaaccccg agggcaaata
 1021 cagcttgggt gccacctgctg tgaagaagtg tccccgtaat tatgtgggtga cagatcacgg
 1081 ctcgtgcgtc cgagcctgtg gggccgacag ctatgagatg gaggaagacg gcgtccgcaa
 1141 gtgttaqaag tgcgaagggc cttgcccaca agtgtgttaac ggaataggta ttgggtgaatt
 1201 taaagactca ctctccataa atgtacgaa tattaaacac ttcaaaaact gcacccat
 1261 cagtggcgat ctccacatcc tgccgggtggc atttaggggt gactccttca cacatactcc
 1321 tcctctggat ccacaggaac tggatattct gaaaaccgtt aaggaaatca cagggtttt
 1381 gctgattcag gcttggccctg aaaacaggac ggacctccat gccttgaga acctagaaat
 1441 catacgccgc aggaccaagc aacatggtca gtttctctt gcagtcgtca gcctgaacat
 1501 aacatcccttggatttgcgtt ccctcaagga gataagtgtt gggatgtga taatttcagg
 1561 aaacaaaaat ttgtgctatg caaatacaat aaactggaaa aaactgtttt ggaccccg
 1621 tcagaaaacc aaaattataa gcaacagagg tgaaaacagc tgcaaggcca caggccaggt
 1681 ctgccatgcc ttgtgctccc ccgagggtctg ctggggcccg gagcccaggg actgcgtctc
 1741 ttggccgaat gtcagccgag gcagggatg cgtggacaag tgcaacccctc tggagggtga
 1801 gccaaggag tttgtggaga actctgagtg catacagtgc caccctgggt gcctgcctca
 1861 ggccatgaac atcacctgca caggacgggg accagacaac tttatccatg gtgcccacta
 1921 cattgacggc ccccaactgctg tcaagacccctg cccggcagga gtcatgggag aaaacaacac
 1981 cctggcttgg aagtacgcag acgcggccca tttgtgcccac ctgtgcccattt caaactgcac
 2041 ctacggatgc actggggccag gtcttgcagg ctgtccaaacg aatggggctta agatcccg
 2101 catcgccact gggatgggtt gggccctctt ctgtgtgtt gtggatggccc tggggatcg
 2161 cctcttcattt cgaaggccgc acatcggtcg gaagcgcacg ctgcggaggg tgctgcagga
 2221 gagggagctt gtggagccctt ttacaccccg tggagaagct cccaaccaag ctctcttgag
 2281 gatcttgcattt gaaactgttca tcaaaaaat cttttttttt cttttttttt cttttttttt
 2341 ggtgtataag ggactctgga tcccaagaagg tgagaaagtt aaaattcccg tgcgtatcaa
 2401 ggaattaaga gaagcaacat ctccgaaagc caacaaggaa atccctcgatg aagccatcg
 2461 gatggccagc gtggacaacc cccacgtgtg cccgcctgtt ggcacatgtcc tcaccc
 2521 cgtcagctc atcacgcagc tcatgcccctt cggctgcctc ctggactatg tccggaaaca
 2581 caaagacaat attggctccc agtacccgtt caactgggtt gtgcagatcg caaaggcc
 2641 gaactacttg gaggaccgtc gcttgggtca cccgcacccgtt gcagccaggg acgtactgg
 2701 gaaaacaccg cagcatgtca agatcacaga tttttgggtt gccaactgtc tgggtgcgg
 2761 agagaaaaaa taccatgcag aaggaggca agtgcctatc aagtggatgg cattgaaatc
 2821 aattttacac agaatctata cccaccaggat tgatgtctgg agtacccggg tgaccgttt
 2881 ggagttgatg acctttggat ccaagccata tgacggaaatc cctgcctcccg agatctcc
 2941 catccctggag aaaggagaac gcctccctca gcccaccata tgaccatcg atgtctacat
 3001 gatcatggtc aagtgcgttca tgatagacgc agatagtcgc ccaaagttcc gtgagttgt
 3061 catcgaaattt tccaaaatgg cccgagaccc ccagcgatc cttgtcattt agggggatga

FIGURE 30A

3121 aagaatgcac ttgccaagtc ctacagactc caacttctac cgtccccgtga tggatgaaga
 3181 agacatggac gacgtgggtt atggcgacga gtacctcatac ccacagcagg gcttcttcag
 3241 cagccctcc acgtcacgga ctcccctctc gagctctctg agtgcaacca gcaacaattc
 3301 caccgtggct tgcattgata gaaatgggtt gcaaagctgt cccatcaagg aagacagctt
 3361 cttgcagcga tacagcttag accccacagg cgccttact gaggacagca tagacgacac
 3421 cttccctccca gtgcctgaat acataaaacca gtccgttccc aaaaggcccc ctggctctgt
 3481 gcagaatcct gtcttatcaca atcagcctct gaaccccgcg cccagcagag acccacacta
 3541 ccaggacccc cacagcaactg cagtggca ccccgagtat ctaaacactg tccagcccc
 3601 ctgtgtcaac agcacattcg acagccctgc ccactggcc cagaaaggca gccaccaaat
 3661 tagcctggac aaccctgact accagcagga cttcttccc aaggaagcca agccaaatgg
 3721 catcttaag ggctccacag ctgaaaatgc agaataacca agggtcgccgc cacaaggcag
 3781 tgaattttt ggagcatgac cacggaggat agttaggcc ctaaaaatcc agacttttc
 3841 gatacccagg accaagccac agcaggctt ccactccaaac agccatgccc gcattagctc
 3901 ttagacccac agactggtt tgcaacgttt acaccgacta gccaggaagt acttcacac
 3961 cgggcacatt ttgggaagtt gcattccctt gtcttcaaacc tggtaagcat ttacagaaac
 4021 gcatccagca agaatattgt cccttgagc agaaatttat cttcaaaaga ggtatatttg
 4081 aaaaaaaaaa aaaaagtata tgtgaggatt ttattgatt gggatctt gagttttca
 4141 ttgtcgctat tgattttac ttcaatggc tcttccaaaca aggaagaagg ttgctggtag
 4201 cacttgctac cctgagttca tccaggccca actgtgagca aggagcacaa gccacaagtc
 4261 ttccagagga tgcttgattc cagtggttct gcttcaaggc ttccactgca aaacactaaa
 4321 gatccaaagaa ggccttcatg gccccagcag gccggatcgg tactgtatca agtcatggca
 4381 ggtacagtag gataagccac tctgtccctt cctggggaaa gaagaaacgg agggatgaa
 4441 ttcttcctta gacttacttt tgtaaaaaatg tccccacggg acttactccc cactgatgga
 4501 ccagtggttt ccagtcatga gcgttagact gacttgggg tcttccattt cattgttttg
 4561 aaactcagta tgccggccct gtctgctgt catgaaatca gcaagagagg atgacacatc
 4621 aaataataaac tcggattcca gcccacattt gattcatcag cattggacc aatagcccc
 4681 agctgagaat gtggaatacc taaggataac accgctttt ttctcgcaaa aacgtatctc
 4741 ctaatttgag gtcagatga aatgcattcag gtcccttggg gcatagatca gaagactaca
 4801 aaaatgaagc tgctctgaaa tctcccttag ccatcccccc aacccccc aatttagttt
 4861 tgttacttat ggaagatagt tttctccctt tacttcaattt caaaagctt ttactcaaag
 4921 agtataatgtt ccctccaggc cagctccccca aaaaacccctt cttacgctt tggcacacaa
 4981 aaagtgtctc tgccttgagt catctattca agcacttaca gctctggcca caacaggc
 5041 ttttacaggt gcaatgaca gtgcattat gagtagtgg aattcaggta gtaaatatga
 5101 aactagggtt tgaaattgtt aatgcattca caacatttc agatgtttt gaaggaaaaaa
 5161 agttccttcc taaaataatt tctctacaat tggaaagattt gaagattcag ctatgg
 5221 gcccattttt tcctaattctg tgggtggccct gtaacctgac tggtaacag cagtccttt
 5281 taaaacagtgt tttaaactct cctagtcaat atccacccca tccaattttt caagggagaa
 5341 atggttcaga aataattttc agcctacagt tatgttcagt cacacacaca tacaaaatgt
 5401 tccttttgtt tttaaagtaa tttttgactc ccagatcagt cagagcccc acagcattgt
 5461 taagaaagta tttgattttt gtctcaatga aaataaaaact atattcattt cc (SEQ ID
 NO:53)

FIGURE 30B

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EGFR (NM_005228)

RPSGTAGAALLALLAALCPASRALEEKVCGTSNKLTLGTF
DHFLSLQRMFNNCEVVLGNLEITYVQRNYDLSFLKTIQEVA
GVLIALNTVERIPLQLQIIRGNMYYENSYALAVLSNYDANKT
GLKEPMRNQLQEILHGAVRFSNNPALCNVEIQWRDIVSSD
FLSNMSMDFQNHLGSCQKCDPSCPNGSCWGAGEENCQKL
TKIIICAQQSGRCRGKSPSDCCCHNQCAAGCTGPRESDC
LVCRKFRDEATCKDTCPPLMLYNPTTYQDVNPEGKYSFG
ATCVKKCPRNYVVTDHGSCVRACGADSYE
MEEDGVRKCKCEGPCRVCNGIGIGEFKDSL
SINATNIKFKNCTSISGDLHILPVAFRGDSFTHTPPLDP
QELILKTVKEITGFLLIQAWPENRTDLHAFENLEIIRGRT
KQHGQFSLAVVSLNITSLGLSLKEISDG
DVIISGNKNLCYANTINWKKLFGTSGQTKIISNRGEN
SCKATGQVCHA
CSPEGCWGPEPRDCVSCRNVSRGRECVD
KCNCNLLGEPE
RFVENSECIQCHPECLPQA
NITCTGRGP
DNCIQC
AHYIDGPHCVKT
CPAGVMGEN
NTLWVKYADAGH
VCHLCHPNC
YGCTGP
GLEGC
PTNGPK
IPSIATGM
VGALLLV
VALGIGL
FMRRRH
IVRK
RTLRL
QERELVE
PLTPS
GEAPN
QALLR
ILKETE
FKKIKV
LGSGA
FGTV
KGLWI
PEGE
KVKI
VAIK
ELREAT
SPKAN
KEIL
DEAYV
MASVD
NPVC
RLLGIC
LTSTV
QLITQL
MPFGCL
DYVRE
HKDN
IGSQY
LLNW
WCVQIA
KG
MN
YLED
DRRL
VHD
LA
RLA
RNVL
VKT
PQH
VKITDF
LAK
LLGA
EEKEY
HAEGG
KVPI
KW
MALES
ILH
RIYTH
QSD
VWSY
GTV
WE
LMTFG
SKP
DGIP
ASE
ISSILE
KGERLP
QP
PP
ICT
IDV
Y
MIM
VK
CWM
IDAD
SRPK
FREL
IIEFS
SKMA
DPQR
YLVIQ
GDER
MHLP
PTDS
NFY
RAL
M
DEED
MD
VV
DA
DEY
LIP
P
QQG
FF
SSP
STS
TPL
LSS
LSA
TSNN
NSTV
ACID
RNGL
QSC
PIK
EDS
FL
LQ
RY
SSD
PT
GALT
EDS
ID
DTFL
P
PEY
INQS
VP
KRP
AGSV
QNP
V
HNQ
PLN
PAP
SRD
PHY
QDP
H
STA
VG
NPE
YL
NTV
QPTC
NSTFD
SPA
HWA
QKG
SHQI
ISLD
NPD
Y
QQD
FFP
KEAK
PNG
IFKG
STA
ENA
EYL
RVAP
Q
S
EFIGA (SEQ ID NO: 54)

FIGURE 30C

EPHB2 (NM_004442)

1 gccccgggaa gcgcagccat ggctctcgaa aggctgggg ccgcgtgtc gctgctggcg
61 ctgctcgccg ccgttggaaaga aacgctaattt gactccacta cagcgactgc tgagctgggc
121 tggatgggtgc atccatccatc agggtggaa gaggtgagtg gctacatgtga aaacatgaac
181 acgatccgca cgtaccagggt gtgcaacgtg tttagtcaa gccagaacaa ctggctacgg
241 accaagtta tccggcgccg tggcgccac cgcatttcacg tggagatgaa gtttcgggtg
301 cgtgactgca gcagcatccc cagcgtgcct ggctctgtca aggagacctt caaccttat
361 tactatgagg ctgactttga ctggccacc aagacattcc ccaactggat ggagaatcca
421 tgggtgaagg tggataccat tgcagccac gagagcttcc cccaggtgga cctgggtggc
481 cgcgtcatga aaatcaacac cgaggtgcgg agcttcggac ctgtgtcccg cagcggcttc
541 tacctggcct tccaggacta tggcggtcgc atgtccctca tcgcccgtcg tgcgttctac
601 cgcaagtgcc cccgcattcat ccagaatggc gcatcttcc aggaaaccct gtcggggct
661 gagagcacat cgctgggtgc tgccccggc agctgcattcg ccaatgcggaa agaggtggat
721 gtacccatca agctctactg taacggggac ggcgagtggc tgggtcccat cgggcgtcgc
781 atgtgcaaag caggcttcga ggccgttgag aatggcaccc tctggccgagg ttgtccatct
841 gggactttca aggccaaacca aggggatgag gcctgtaccc actgtcccat caacagccgg
901 accacttctg aaggggccac caactgtgtc tggccgcaatg gctactacag agcagactg
961 gaccccctgg acatgcctg cacaaccatc ccctccgcgc cccaggctgt gatttccagt
1021 gtcaatgaga cctccctcat gctggagtgg accccctcccc gcgactccgg agggccgagag
1081 gacctcgctt acaacatcat ctgcaagagc tgggtctcg gccgggggtgc ctgcaccccg
1141 tgcggggaca atgtacagta cgcaccacgc cagctaggcc tgaccgagcc acgcatttac
1201 atcagtgacc tgcgtggccca caccctgtac accttcgaga tccaggctgt gaacggcggt
1261 actgaccaga gcccattctc gcctcagttc gcctctgtga acatcaccac caaccaggca
1321 gctccatcgg cagtgtccat catgcattcg gtgagccgca ccgtggacag cattaccctg
1381 tcgtggtccc agccggacca gccaaatggc gtgatcctgg actatgatgt gcagactat
1441 gagaaggaggc tcagttagta caacgcacca gccataaaaaa gccccaccaa cacggtcacc
1501 gtgcaggggcc tcaaagccgg cgccatctat gtcttccagg tgccggcacc caccgtggca
1561 ggctacgggc gctacagccgg caagatgtac ttccagacca tgacagaagc cgagatccag
1621 acaagcatcc aggagaagtt gccactcatc atcggctctt cggccgctgg cctggcttcc
1681 ctcattgtctg tgggtgtcat cgccatcgtg tgaacagaa gacgggggtt tgagcgtgt
1741 gactcgaggat acacggacaa gctgcaacac tacaccaggc gccacatgac cccaggcatg
1801 aagatctaca tgcattctt cacttacgag gaccccaacg aggcaatgcg ggagtttgcc
1861 aaggaaatg acatctctg tgtcaaaattt gaggcaggta tcggagcagg ggagtttggc
1921 gaggtctgca gtggccaccc gaagctgcca ggcacagagag agatcttgtt ggcacatcaag
1981 acgctcaagt cgggtacac ggagaagcag cgccgggact tcctgagcga agcctccatc
2041 atggggccagt tcgaccatcc caacgtcatc cacctggagg gtgtcgtgac caagagcaca
2101 cctgtatgtca tcatcaccga gttcatggag aatggctccc tggactccct tctccggca
2161 aacgtgggc agttcacagt catccagctg gtgggcatgc ttccgggcat cgcagctggc
2221 atgaagttacc tggcagacat gaactatgtt caccgtgacc tggctggccg caacatcctc
2281 gtcaacacgca acctggtctg caaggtgtcg gactttggc tctcacgctt tctagaggac
2341 gataacctcg accccaccta caccaggccctt ctggcgaa agatccccat ccgctggaca
2401 gccccggaaag ccattccagta cgggaagttc accttcggccaa gtgatgtgtc gagctacggc
2461 attgtatgtt gggaggtgtat gtcctatggg gagcggccct actgggacat gaccaaccag
2521 gatgtatca atgcatttaa gcaaggactat cggctgcccac cgcggatccatc
2581 gcccgtcacc aactcatgtct ggactttgg cagaaggacc gcaaccaccc gcccggatcc
2641 ggcggaaattt tcaacacgct agacaagatg atccgcattt ccaacagcctt caaaggccatg
2701 ggcggccctt cctctggcat caacctgccc ctgctggacc gcacgatccc cgcactacacc
2761 agctttaaaca cgggtggacga gtggctggag gccatcaaga tggggcagta caaggagac
2821 ttgcggcaatg cgggttcac ccctttgac gtcgtgtctc agatgtatgtt ggaggacatt
2881 ctccgggttg gggtcacttt ggctggccac cagaaaaaaaaa tcctgaacag tatccaggtg
2941 atgcggggcgc agatgaacca gattcagtct gtggaggttt gacattcacc tgcctcggt
3001 cacctttcc tccaagcccc gccccctctg cccacgtgc cggccctctt ggtgtcttat

FIGURE 31A

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3061 ccactgcagg gccagccact cgccaggagg ccacggcca cggaagaac caagcggc
 3121 cagccacgag acgtcaccaa gaaaacatgc aactcaaacg acggaaaaaa aaaggaaatg
 3181 ggaaaaaaga aaacagatcc tggaggggg cggaaatac aaggaatatt tttaaagag
 3241 gattctcata aggaaagcaa tgactgtct tgccgggat aaaaaggc ttggagatt
 3301 catgcgtgt gtccaatcg agacaaaagc agtttcttc caactccctc tggaaaggtg
 3361 actgtgccag agccaaagaaa cacttcaga aaaacaatg tgaaggggag agacaggggc
 3421 cggcccttggc tcctgtccct gctgctcctc taggcctcac tcaacaacca agcgcctgga
 3481 ggacgggaca gatggacaga cagccaccct gagaaccct ctggggaaat ctattctgc
 3541 caccactggg caaacagaag aattttctg tcttgaga gtatttaga aactccaatg
 3601 aaagacactg tttctcctgt tggctcacag ggctgaaagg ggctttgtc ctccctggtc
 3661 agggagaacg cggggaccctc agaaaggta gccttcctga ggtgggcaa cccccaggc
 3721 tgcagctcca ggtacatatac acgcccacag cttggcagcc tggccctcct ggtgeccact
 3781 cccgcagcc cctgcctoga ggactgatac tgcaactgact gccgtcagct ccgactgccc
 3841 ctgagaaggg ttgatcctgc atctgggtt gtttacagca attcctggac tgggggttat
 3901 tttggtcaca ggggtggttt ggttaggg gtttgggtt tgggtttttt tttttttttt
 3961 ggtttttttt aatgacaatg aagtgcact ttgacatttc ctacctttt aggacttgat
 4021 ccttcctccag gaagaagggtt ctctctgtt actgacttag gcaatacacc aaggggcaga
 4081 ttttatatgc acatttctgg attttttat acggtttca ttgacactct tccctccctcc
 4141 cacctgcac caggcctcac caaagccac tgccatgggg ccatctgggc cattcagaga
 4201 ctggagttagt atttgggtt ggagggggag ggcacaagggtt ggaggagctt cccactccag
 4261 gactgtttagt gaaagggaca gattgaggag gaagtgggtt ctgaggctgc agggctggaa
 4321 gtcctgccc acttccact ctcctgcccc aatctatcta gtacttccca ggcaaatagg
 4381 cccctttagt gtccttagt gccccttagt ggtcaaaacc cagtttccc tctggagcc
 4441 taaaccaggc tgcacccggag gccaggacc ggttcattca ctgtgatacc ctgcctcca
 4501 gaggggtgcgc tcagagacac gggcaagcat gcctttccc ttccctggag agaaagtgtg
 4561 tgatttctct cccacctct tccccccacc agaccttgc tggcctaaa ggtctggcc
 4621 atggggacgc cctcagtcgatggatctggc cacagactcc ctccctgtgaa ccaacacaga
 4681 caccsaagca gagcaatcag ttagtgaatt g (SEQ ID NO:55)

FIGURE 31B

EPHB2 (NM_004442)

ALRRILGAALLLPPLAAVEETLMDSTTATAELGWMVHPPSGWE
 VSGYDENMNTIRTYQVCNVFESSQNWLRTKFIRRRGAHRIHDEMKSVDCCSIPS
 PGSKETFNLYYYEADFDSATKTFPNWMENPWVKVDTIAADESFSQLGLGRVMKIN
 EVRSFGPVSRSQFYLAQDQYGGCMLIAVRVFYRKCPRIQNGAIFQETLSGAESTS
 VAARGSCIANAEVDVPIKLYCNGDGEWLVPIGRCMCKAGFEAVENGTCRGCPST
 KANQGDEACTHCPINSRTTSEGATNCVRNGYRADLDPLDMPCCTTIPSAQAVI
 NETSLMLEWTPPRDSGGREDLVNIICKSCSGSRGACTRCGDNVQYAPRQLGLTEPR
 YISDLLAHTQYTIEIQAVNGVTDQSPFSPQFASVNITNNQAAPSIMHQVSR
 ITLSWSQPDQPNVGILDYELQYYKEELSEYNATAIKSPTNTVTQGLKAGAIYFQV
 ARTVAGYGRYSGKMYFQTMTEAEYQTTSIQEKPLIIGSSAAGLVFLIAVVIAIVCN
 RRGFERADSEYTDKLQHYTSGHMTPGMKIYIDPFTYEDPNEAVREFAKEIDISCVKI
 QVIGAGEFGEVCSGHLKLPKGREIFVAIKTLKSGYTEKQRRDFLSEASIMQFDHPN
 IHLEGVVTKSTPVMIITEFMENGSLSFLRQNDGQFTVIQLVGMLRGIAAGMKYLAD
 NYVHRDLAARNILVNSNLVCKVSDFGLSRFLEDDTSALGGKIPIRWT
 FNTVDEWLEAIKGQYKESFANAGFTSFDVVSQMMMEDILRVGVTLAGHQKKILNSI
 VMRAQMNCIQSVEV (SEQ ID NO:56)

FIGURE 31C

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CRIPTO CR-1 (NM_003212)

```

1 ggagaatccc cgaaaaaggct gagtctccag ctcaagggtca aaacgtccaa ggcggaaagc
61 cctccagtt cccctggacg ccttgctct gcttctgcta cgaccttctg gggaaaacga
121 atttcattt ttcttcttaa attgccattt tcgctttagg agatgaatgt tttcccttgg
181 ctgtttggc aatgactctg aattaaagcg atgctaacgc ctctttccc cctaattgtt
241 aaaagctatg gactgcagga agatggcccg ctctcttac agtgtgattt ggatcatggc
301 catttctaaa gtcttgaac tgggattagt tgccggctg ggcacatcagg aatttgcctg
361 tccatctcg ggatacctgg ccttcagaga tgacagcatt tgccccagg aggacctgc
421 aattccggcct cggcttccc agcgtgtgcc gccccatgggg atacagcaca gtaaggagct
481 aaacagaacc tgctgcctga atggggaaac ctgcatgctg gggctctttt gtgcctgccc
541 tccctccctc tacggacgga actgtgagca cgatgtgcgc aaagagaact gtgggtctgt
601 gccccatgac acctggctgc ccaagaagtg tttccctgtgt aaatgtggc acggtcagct
661 ccgctgctt cctcaggcat ttctaccgg ctgtgatggc ctgtgatgg atgagcacct
721 cgtggcttcc aggactccag aactaccacc gtctgcacgt actaccactt ttatgctagt
781 tggcatctgc ctttctatac aaagctacta ttaatcgaca ttgacctatt tccagaaata
841 caattttaga tatcatgcaa atttcatgac cagtaaaggc tgctgctaca atgtcttaac
901 tgaaagatga tcattttagt ttgccttaaa ataatgaata caatttccaa aatggtctct
961 aacatttcct tacagaacta cttcttactt ctttgcctg ccctctccca aaaaactact
1021 tctttttca aaagaaaagtc agccatatct ccattgtgcc taagtccagt gtttctttt
1081 tttttttttt ttgagacgga gtctcactct gtcacccagg ctggactgca atgacgcgat
1141 cttgggttcaac tgcaacccccc gcattccgggg ttcaaggccat ttcctgcct aagccctccca
1201 agtaactggg attacaggca tgtgtcacca tgcccagcta attttttgtt atttttagtag
1261 agatgggggt ttcaccatat tggccagttt ggtctcgaac tctgacctt tgatccatcg
1321 atcagcctct cgagtgtca gattacacac gtgagcaact gtgcaaggcc tgggtttct
1381 tgatacatgt aattctacca aggtttttt aatatgttct tttaaatgat tgaatttat
1441 gttcagatta ttggagacta attctaattgt ggacctttaga atacagttt gagtagagtt
1501 gatcaaaatc aattaaaata gtcttttaa aaggaaagaa aacatctta aggggaggaa
1561 ccagagtgtt gaaggaatgg aagtccatct gcgtgtgtgc agggagactg ggttaggaaag
1621 aggaagcaaa tagaagagag aggtgaaaa acaaaatggg ttacttgatt ggtgatttagg
1681 tgggtgtaga gaagcaagta aaaaggctaa atggaaggggc aagtttccat catctataga
1741 aagctatata agacaagaac tccccctttt ttcccaagg cattataaaa agaatgaagc
1801 ctccttagaa aaaaaattat acctcaatgt ccccaacaag attgcttaat aaattgtgtt
1861 tcctccaagc tattcaattc ttttaactgt tggaaagac aaaatgttca caatataattt
1921 agttgttaaac caagtgtatca aactacatata tggaaagccc atttttaaaa tacattgtat
1981 atatgtgtat gcacagtaaa aatggaaact atattgaccc aaaaaaaaaaaa aaa (SEQ ID
NO:57)

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FIGURE 32A

CRIPTO CR-1 (NM_003212)

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DCRKMARFSYSVIWIMAISKVFELGLVAGLGHQEFAFPSRGYL
FRDDSIWPQEEPAIRPRSSQRVPPMGIQHSKELNRTCCLNGGTCMLGSFCACPPSFY
RNCEHDVRKENCGSVPHDTWLPKKCSLCKWHQLRCFPQAFLPGCDGLVMDEHLVA
RTPELPPSARTTFMLVGICLSIQSYY (SEQ ID NO:58)

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FIGURE 32B

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Eprin B1 (NM_004429)

1 gagtagacag cacagcggca gcggaggagg tctatgcgag ctggacagca gtgggagggtt
 61 tgtgaggctc gcactggccg cagaccctcg ggctcgatcg cccgggagcc aggactcggc
 121 gacgcgaggc tgccgggcta cccggccgag gttcggggg cgaaactaa tggactggc
 181 tcgctcgca gcatctcccc gctttctaa gtacactgag cagggcccgc gctgaagtag
 241 aagctgtccg ggggcgcgta gcccggagtc ccagtgtggc cgggaggaac ggagcccgtg
 301 ccagggcggc ccagtggga gccccgggac cgagcttgtg ctgtggggaa acccccactt
 361 cttccaagggg acagcgatcc cgggacggc gaggcgtcg ggcggtcacc gagacctctg
 421 cgggaagacc ccgtcgggga gaggcgcgc agccccgaag cgtctcgga agtcgagcgg
 481 aatcgggcgg gatcacccgg gggcgcagag ccccgctgc gcctcggtcg gcagcggaga
 541 gcccaggaga acgagccctc gggggccgaa gccatgccc gggttggggg cggctgccc
 601 gtgagtctc ctggccggcc gggcggagaa gagcgacacc gaagccggcg ggaggggagc
 661 acttcaaggc cggcggtcg ggaggatggg cgcctgagcg gctccgagcg cagcggcga
 721 gaggaaggcg aggcgagctt ttgtgaggag ggcggcaagg atccgaagt gcagtctgcc
 781 cccgggaaga tggctegggc tggcggagct tggcteggca agtggcttg ggcgatggc
 841 gtgtggcgc tggccggct cggccacacc ctggccaaga acctggagcc cgtatctgg
 901 agtccctca accccaagg tctgagtggg aagggtttgg tatatctatcc gaaaatttgg
 961 gacaagctgg acatcatctg ccccgagca gaagcaggc gggccatata gtaactacaag
 1021 ctgtacctgg tgcggectga gcaggcagct gcctgttagca cagttctcgca ccccaacgtg
 1081 ttggtcacct gcaataggcc agagcaggaa atacgcttta ccatcaagtt ccaggagttc
 1141 agcccaact acatgggcct ggagttcaag aagcaccatg attactatc tacctcaaca
 1201 tccaatggaa gcctggaggg gctggaaaac cgggaggcgg gtgtgtggc cacacgcacc
 1261 atgaagatca tcatgaaggt tggcaagat cccaatgctg tgacgctgca gcagctgact
 1321 accagcaggc ccagcaaggaa ggcagacaac actgtcaaga tgccacaca gggcccttgt
 1381 agtcggggct ccctgggtga ctctgatggc aagcatgaga ctgtgaaccca ggaagagaag
 1441 agtggcccaag gtcaagtg gggcagcagc ggggaccctg atggcttctt caactccaag
 1501 gtggcattgt tcggcggctgt cgggtccgggt tgctgcatct tctgtctcat catcatctt
 1561 ctgacggtcc tactactgaa gctacgcaag cggcaccgca agcacacaca gcagcggcgg
 1621 gctccctct cgctcagtag cctggccagt cccaaagggg gcagtggcac agcgggcacc
 1681 gagcccaagcg acatcatcat tcccttacgg actacagaga acaactactg ccccaactat
 1741 gagaaggtga gtggggacta cgggcaccct gtctacatcg tccaagagat gggcccccaag
 1801 agccggcgc acatctacta caaggtctga gtggccggca cgcctcagg ccccccgggg
 1861 acagtccggc tggaccggac ctctcccttc gcccccacac cccctccct tgccagctgt
 1921 gcccacctt gtatttagt ttgttagttc ttggctttta taatccccct tttccctgc
 1981 cccctgggt tcgggggggg gtgcttgc cccataaaaaa catgtcttg tgcctccccc
 2041 ctctggccag gcctctggc tccgtggggg cggccctct tgaaggcagc ggctggacac
 2101 tcatggacag caggcaggga gacagtcccc tggccctgca cccccccttgc
 2161 acctcccaag gactgtttt ccgtatcat cactgtttt aatgtttt ttttccat
 2221 ttagctgtca actcatttt atctgtttt tgaagaaaaa tggaaaaatg taaaaggcag
 2281 cccctccca ggcttgcga gcctggccca agccagtaga aggggcctg gggcacgtg
 2341 tggtcagcca ggaagcatag gatgccattt ctttataga ttcttgcga tttctgggtgg
 2401 ggtaaggggc aggccaggc tgttcacgcc catgagggaa gggaaaagtg ccactggcga
 2461 aggtgtccca ccctcccccc ctgaccctcc tacgaggctt atcttgcaca tggggtagtc
 2521 actgccaccc ttccacacac acacacacac acacacacac aaaaaaaaaa ccctcccttgc
 2581 tgggattctt gggcatctcc tgcctccctc actctcactgg taattaatgt cttaattggc
 2641 tgttgcctgg ggaacaggag agctgtgca ggcagatgac ctcatggggg gtggagggag
 2701 gtgaggtgcc cagggtggcta ttggccctgc agagctggga gtttaccccc cccccccac
 2761 cctgttctct ctttacctt ggcattttt ggcctgggg gggaaacagag gcccagggtg
 2821 gagacctaag cgggtataag accaggtggc ctgtccctt tctggccctt agcacagggtg
 2881 ggtaaccccc acccaaccca gtcctgtcg ctgtccctgtt cttggctgg ggcctggaaa
 2941 gaggaagagg ctgcctgggg ctggccagc cgcgtgtgca ctttgacccc agttccttgc
 3001 cagcacggct gctaacagac tgccacttga gtgcgcctt caggcactcc cagagcagcc
 3061 atggaaggag ctggccctca caccatccac ctccacactg ctcctggcc agctgcccac
 3121 cccagtgcca ggtggggag ggagcagaac agccagcccc ttccaggtgg cagtcggaaag
 3181 ggtttttgtt ttgtttctg ttgcatttg taaaatact agtctttttt gaaaaaaaat
 3241 aatgtaaaga tgttttgtat aaactctgaa ttatcttctt gttgttttt tcttagaaaa
 3301 aatgagaac taaaaaaaaaa aaattaacca catggaaaaa aaaaaa (SEQ ID NO:59)

FIGURE 33A

Eprin B1 (NM_004429)

MARPGQRWLKGKWLVAMVVWALCRLATPLAKNLEPVSWSSLNPKF
LSGKGLVIYPKIGDKLDIICPRAEAGR PYEYYKLYLVRPEQAAACSTVLDPNVLVTCN
RPEQEIRFTIKFQEFS PNYMGLEFKHHHDYYITSTSNGSLEGLENREGGVCRTTMKI
IMKVGQDPNAVTPEQLTTSRPSKEADNTVKMATQAPGSRGSLGDSDGKHETVNQEEKS
GPGASGGSSGDPDGFFNSKV ALFAAVGAGCVIFLLIIIFLTVLLLKLKRHKHTQQR
AAALSLSTLASPKGGSGTAGTEPSDIIIPLRTTENNYCPHYEKVSGDYGH PVYIVQEM
PPQSPANIYYKV (SEQ ID NO:60)

FIGURE 33B

MMP-17/MT4-MMP (NM_016155)

1 ccggcgaaaa cgccgcggag agcggaggc gcccggctgc ggaacgcgaa gcggaggcg
 61 cgggaccctg caacgcgcgc gcgccccat gtgagcgcga tgccgcgcgc cgca
ggaccggcc cgccgcggcc agggcccgga ctctcgccgt tgccgcgtget gccgc
121 ctgcgtgtgc tgctggcgct ggggacccgc gggggctgcg cgcgcgcgc acccg
181 cgcgcgagg acctcagcct gggagtggag tggctaagca gttcggtta cctgc
241 gtcgacccca caacaggggca gctgcagacg caagaggagc tgtctaaggc catcac
301 atgcagcagt ttggctggcct ggaggccacc ggcattctgg acgaggccac cctgg
361 atgaaaaccc cacgcgtgtc cctgccagac ctccctgtcc tgacccaggg tcgc
421 cggcaggctc cagcccccac caagtggAAC aagagGAACC tgcgtggag gtc
481 ttccccacggg actcaccact ggggcacgc acggtgctg cactcatgtt ctacgc
541 aaggctcttggaa ggcacatttc gcccctgttac ttccacggg tgccggcag cacc
601 atccagatcg acttctccaa ggccgaccat aacgcaggct accccttcga cgg
661 ggcacccgtgg cccacgcctt cttcccccggc caccaccaca cccgcggggg
721 caccacccat caccacccat caccacccat caccacccat caccacccat
781 gacgatgacg aggccctggac cttccgttcc tcggatgccc acggatgg
841 gtggctgtcc acgagtttg ccaegccatt gggtaagcc atgtggccgc
901 atcatgcggc cgtactacca gggccgggt ggtgacccgc tgctgttgc
961 gaggacaagg tgccgcgttgc gcaatgttgc ggtgtgcggg agtctgttgc
1021 cagcccgagg agcctccctt gctgcggag ccccccacaca accggtccag
1081 aggaaggacg tgccccacag atgcagcact cactttgacg cggc
1141 gaagctttct tcttcaaagg caagtacttc tggcggttgc cgcgggacc
1201 tccctgcagc cggcacatgc gcaatgcgttgc tggcggttgc
1261 gtggacgcgc tgtaatgcgc caccagcgc
1321 tactgggtgt tcaaggacaa taacgttagag
1381 agcctccgc ctggcgcat cgacgcgttgc
1441 ttctttaagg accagctgttgc ctggcgcat
1501 taccccgccc agagccccc
1561 tggatgcgc tgcccttgc
1621 gagctggagg tggcaccgg
1681 gactcacagg cggatggatc
1741 cttccaggac aacatgcac
1801 tctggggcat cctctccccc
1861 ctgcgtccgc cactgttgc
1921 cacacagcgc gagcccatga
1981 ggactgtgcc ggagtccctg
2041 accggaaaggc cagcagagg
2101 ggagctgtcc cctagtgg
2161 agggtgttgc
2221 ggctgggggc
2281 tgctccgc
2341 agacgagccc
2401 tgacccatgc
aaaaaaaaaaaa
aaaaaaaaaaaa
(SEQ ID NO:61)

FIGURE 34A

MMP-17/MT4-MMP (NM_016155)

MRRRAARGPGPPPGPGLSRLPLLPPLLLLLLALGTRGGCAAPA
PAPRAEDLSLGVEWLSRGYLPADPTTQLQTQEELSKAITAMQQFGGLEATGILDE
ATLALMKTPRCSLPDLPVLTQARRRQAPAPTKWNKRNLSWRVRTFPRDSPLGHDTVR
ALMYYALKVWSDIAPLNFHEVAGSTADIQIDFSKADHNDGYPFDPGPGTVAHAFFPGH
HHTAGDTHFDDDEAWTFRSSDAHGMDLFAVA VHEFGHAIGLSHVAAHSIMRPYYQGP
VGDPLRYGLPYEDKVRVWQLYGVRESVSPTAQPEEPPLLPEPPDNRSSAPRKDVPHR
CSTHFDAVAQIRGEAFFFKGKYFWRLTRDRHLVSLQPAQMHRFWRGLPLHLDSDAVY
ERTSDHKIVFFKGDRYWVFKDNNVEGYPRPVSDFSLPPGGIDA AAFSWAHNDRTYFFK
DQLYWRYDDHTRHMDPGYPAQSPLWRGPSTLDDAMRWS DGASYFFRGQEWKVLDGE
LEVAPGPQSTARDWLVCGDSQADGSVAAGVDAAE GPRA APPGQHDQSRSEDGYEV CSC
TSGASSPPGAPGPLVAATMLLLPLSPGALWTAAQALT (SEQ ID NO:62)

FIGURE 34B

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MMP26 (NM_021801)

1 gacaaatgag ggtttggcat gcagctcgtc atcttaagag ttactatctt cttgccttg
61 tgttcggccg ttccagtgcc ccctgctgca gaccataaaag gatgggactt tggtgagggc
121 tattttccatc aatttttctt gaccgagaag gagtcggcac tccttaccca ggagacacaa
181 acacagctcc tgcaacaatt ccatcgaaat gggacagacc tacttgacat gcagatgcat
241 gctctgtac accagccccca ctgtggggtg cctgtatgggt ccgacacactc catctcgcca
301 ggaagatgca agtggaaataa gcacactcta acttacagga ttatcaatta cccacatgt
361 atgaagccat ccgcagtgaa agacagtata tataatgcag tttccatctg gagcaatgtg
421 accccttga tattccagca agtgcagaat ggagatgcag acatcaagggt ttcttctgg
481 cagtggggcc atgaagatgg ttggccctt gatggggccag gtggtatctt aggccatgcc
541 ttttaccaa attctggaaa tcctggagtt gtccattttg acaagaatga acactggtca
601 gcttcagaca ctggatataa tctgttctg gttgcaactc atgagattgg gcattcttg
661 ggcctgcagc actctggaa tcagagctcc ataatgtacc ccacttactg gtatcacgac
721 cctagaacct tccagctcag tgccagatgtatccaaagga tccagcatt gtatggagaa
781 aaatgttcat ctgacataacc ttaatgttag cacagaggac ttattcaacc tgtcccttca
841 gggagtttat tggaggatca aagaactgaa agcaactagag cagccttggg gactgctagg
901 atgaagccct aaagaatgca acctagtcg gttagctgaa ccgacactca aaacgctact
961 gagtcacaat aaagattgtt ttaaagagta aaaaaaaaaa aaaaaaaaaa (SEQ ID
NO:63)

FIGURE 35A

MMP26 (NM_021801)

MQLVILRVТИFLPWCFAVPVPPAADHKGWDFVEGYFHQFFLTEK
SPLLTQETQTQLLQQFHRNGTDLLDMQMHALLHQPHCGVPDGSDTSISPGRCKWNKH
LTYRIINYPHDMKPSAVKDSIYNAVISIWSNVTPLIFQQVQNGDADIKVSFWQWAHED
WPFDGPGGILGHAFLPNSGNPGVVHFDKNEHWSASDTGYNLFLVATHEIGHSLGLQH
GNQSSIMYPTYWYHDPRTFQLSADDIQRIQHLYGEKCSSDIP (SEQ ID NO:64)

FIGURE 35B

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ADAM10 (NM_001110)

1 gaattcggagg atccgggtac catggcgcc ggcaggccta gcagcacggg aaccgtcccc
61 cgcgcgcatg cgcgcccc tgaagcgctt gggggacggg tatggcgccc aggttaggggg
121 gcggtccgc gtgcagttt ggtgcccgcg cgtcacgtgg tgaggaagga ggccggagggtc
181 ttagttcga gggagggggg gagagaagag ggaacgagca aggaaaggaa agcggggaaa
241 ggaggaagga aacgaacgag ggggaggggag gtcctgttt tggaggagct aggagcgttg
301 ccggccctcg aagtggagcg agagggaggt gcttcgcgt ttctccgtcc aggggagggtc
361 ccggcttccc gtggaggctc cggaccaagc cccttcagct tctccctccg gatcgatgtg
421 ctgtgttaa cccgtgagga ggcggcgccg gcgccagcg cagcggaga tggtgttgc
481 gagagtgtta attctgctcc tctcctggc ggcggggatg ggaggtcagt atggaaatcc
541 tttaataaaa tatatcagac attatgaagg attatcttac aatgtgatt cattacacca
601 aaaacaccag cgtgccaaaa gagcagtc acatgaagac caatttac gcttagattt
661 ccatgcccatt ggaagacatt tcaacctacg aatgaagagg gacactccc tttcagtga
721 tgaatttaaa gtagaaacat caaataaagt acttgattat gataccttc atattacac
781 tggacatatt tatggtgaag aaggaagtt tagccatggg tctgttattg atggaagatt
841 tgaaggattc atccagactc gtggggcac attttatgtt gagccagcag agagatata
901 taaagaccga actctgccc ttcactctgt catttatcat gaagatgata ttaactatcc
961 ccataaatac ggtcctcagg ggggctgtgc agatcattca gtatttggaa gaatgaggaa
1021 ataccagatg actgggttag aggaagtaac acagatactt caagaagaac atgctgctaa
1081 tggccagaa cttctgagga aaaaacgtac aacttcagct gaaaaaaaaaata ctgtcagct
1141 ttatattcag actgtacattt tttttttttaa atattacggg acacgagaag ctgtgattgc
1201 ccagatattc agtcatgtt aagcgattga tacaattttac cagaccacag acttctccgg
1261 aatccgtaac atcagttca tggtaaaacg cataagaatc aatacaactg ctgatgagaa
1321 ggaccctaca aatccccc gtttccaaaa tattgggtgtg gagaagttt tggattgaa
1381 ttctgagcag aatcatgtatc actactgtt ggctatgtc ttcacagacc gagattttga
1441 tggatggcgta cttggctcgg cttgggttgg agcacccatca ggaagctcg gaggaatatg
1501 tggaaaaaagt aaactctatt cagatggtaa gaagaagttt ttaaacactg gaattattac
1561 tggatggcagc tatgggtctc atgtacccca caaagtctt cacattactt ttgctcacga
1621 agttggacat aactttggat cccccatgtt ttctggaaaca gagtgcacac caggagaatc
1681 taagaatttgg ggtcaaaaaag aaaatggcaa ttacatcatg tatgcaagag caacatctgg
1741 ggacaaactt aacaacaata aattctcaact ctgttagatt agaaatataa gccaagttt
1801 tgagaagaag agaaacaaact gttttgtga atctggccaa cctatttgc gaaatggaaat
1861 ggtagaacaa ggtgaagaat gtgattgtgg ctatagtgc agtgttaaaatgaaatgtct
1921 ctctgatgca aatcaaccag agggaaagaaa atgcaacttgc aacacttgggaaac aacactgggaa
1981 tccaagtcaa ggtccttgc tgcacgcaca gtgtgcattt ggttcacag ctctctgccc
2041 tcgggatgt tcagactgtc caagggaaat aatatgtaat catacacaag ttttcattaa
2101 agcatctgac cctaaaccaa acttcacaga ctgtaatagg gaggagtgtc cgtgtccag
2161 tgggcaatgt gcagggttcta tctgtgagaa atatggctt tttatgttgc gttatgaaagaaatggcc
2221 ttctgatggc aaagatgata aagaattatg ccatgtatgc cacttcactg gtcgaaccat
2281 atcaacttgtt gccagttacag ggtctgtca gtggagtagg tactgtatg ttttcattaa
2341 caccctgcaa cctggatccc cttgcaacga ttttagaggt ggttgcacatc gttatgttgc
2401 gtgcagatta gtagatgtc atggctctt agctaggctt aaaaaagcaa ttttttagtcc
2461 agagctctat gaaaacattt ctgaatggat tggggctcat tggggcag tattacttat
2521 gggaaattgtc ctgatcatgc taatggctgg atttattaaat atatgcactg ttcatactcc
2581 aagttagtaat ccaaagtgc ctccctctaa accacttcca ggcactttaa agaggaggag
2641 acctccacag cccattcagc aaccccgagcg tcagcgcccc cgagagagtt atcaaatggg
2701 acacatgaga cgctaactgc agcttttgc ttggttcttca ttagtgccta caatggaaa
2761 acttcactcc aaagagaaaac ctattaaatc atcatctcca aactaaaccc tcacaagtaa
2821 cagttgaaga aaaaatggca agagatcata tcctcagacc aggtgaaattt actttaattt
2881 taaaaggctga aaattccat ttgggggtgg gaggtggaaa aggaacccaa ttttctttag
2941 aacagatatt tttaacttaa tggcacaatg tcttagaata ttattatgtt ccccgtgttc
3001 cctgttcttc gttgtcgtt tttcttcaact tgcaaggaaa ctggctctc aataaaacttt
3061 taccacaaat taaaataat atatttttt caacttccaa tcaaggcttag gaggctcgac
3121 cacctcaaca ttggagacat cacttgc tgcacatacc ttgttatatg cagacatgt
3181 ttcttctacgt acactgtact tctgtgtca attgtaaaca gaaattgcaat tggatgtt
3241 tctttgtatt ataaaatttt tccgcttta attaaaaattt actgttaat tgacataactc
3301 aggataaacag agaatggtgg tattcagttt tccaggattc tgaatgtt tacacaggca
3361 gttttgaaat gaaaatcaat ttacccatg gtacccggat cctcgaattc (SEQ ID

NO : 65)

FIGURE 36A

ADAM10 (NM_001110)

VLLRVLILLLSWAAGMGGQYGNPLNKYIRHYEGLSYNVDSLHQ
HQRAKRAVSHEDQFLRLDFHAHGRHFNLRMKRDTSLFSDEFKVETSNKVLDYDTSI
TGHIYGEEGSFSGHSVIDGRFEGFIQTRGGTFYVEPAERYIKDRTL.PFHGSVIYHEDD
NYPHKYGPQGGCADHSVFERMRKYQMTGVEEVVTQIPQEEHAANGPELLRKRTTSAE
NTCQLYIQTDLFFKYYGTREAVIAQISSHVKAIDTIYQTTDFSGIRNISFMVKRIR
NTTADEKDPTNPFRFPNIGVEKFLELNSEQNHDDYCLAYVFTDRDFDDGVGLAWVG
PSGSSGGICEKSMLSDGKKSLNTGIITVQNYGSHVPPKVSHITFAHEVGHNFGSP
DSGTECTPGESKNLGQKENGNYIMYARATSGDKLNNNKFSLCSIRNIISQVLEKKRNN
FVESGQPICCGNGMVEQGECDCGYSQCKDECFCFDANQPEGRKCKLPGKQCSPSQG
CCTAQCAFKSKECRDDSDCAREGICNGFTALCPASDPKPNFTDCNRHTQVCINGQ
AGSICEKYGLEECTCASSDGKDDKELCHVCCMKKMDPSTCASTGSVQWSRHFSGRTI
LQPGSPCNDFRGYCDVFMRCLVDADGPLARLKKAIIFSPELYENIAEWIVAHWWAVL
MGIALIMLMAGFIKICSVHTPSSNPKLPPPPLPGTLKRRRPPQPIQQPQRQPRES
QMGHMRR (SEQ ID NO: 66)

FIGURE 36B

1 cttgggtggg cagtgcaga ctaactgcagt cagcaagtgt gcgggcttaa gagttcttcc
 61 agagcccact tccatttct ttgttgctt aactagagtc accagtctgt ctcattttt
 121 atggtagac cattggaga actaacttag attttaggct ctaataagt tctgtggtaa
 181 aaataagatc atgtaacact tatgttttag aaatttccat agagaaggat catgtcttaa
 241 agccaaaatt tatttggtag acacaaggat acgggaaagt agaacatcta aatactgtgt
 301 gtgtgtgcgt gtgcgtgtgc gtgtgtgtgt acaccagtga aaggaatcag gcagtctaa
 361 agaactagct atccatccag catgaccact gtaagaatga ggaatgaggc aggacaacag
 421 agaactctta attgttcaga gaacccagag aactttgtcc cttccccca aaccctgcag
 481 aatgttgagt ctgaaaagtt gagctggta acatgtcagg gccccatgac ctgtggagga
 541 gggaaagatga tggacaagc acagaaccgg ctgagccact gtagatgcag ggctcatctc
 601 catgaatgtc aaaggaacct aagcaacact gaagctcctc cacttgaag aagccctgt
 661 gctgcacata tccaccaagg ccaggagaaa gaaaggagag agacacagcc tgagaccgca
 721 cagttcttg ggaagctccc cagtaaggca cgggcacagg tctgggtgcc tgggtctggg
 781 aaaagcagag agcaactggc ctgatggaca gagatcctcc atcatcagca gtttgggaa
 841 gccatgtcag tggcagcagc ggggagaggg tttgcctcca gtctgtctc cccacagatc
 901 aggcaaatag cttaaaaga agctaagcta acacccata tctggcgcc actgcactgg
 961 aacttggac tgagactagt gccatctgtc agagtaggaa ttttgggtgt actgatttt
 1021 ctcccgagca cggtctgtga cattggatct gtatataatt cttccatgtaa aactgtcatc
 1081 cctgagagac tgccaggcaa gggggggaaa gaccctggag ggaagggtgtc ctacatgcta
 1141 ttgatgcaag gccaaaagca gotgcttcac ctgcaggtaa agggacacta ccctgagaat
 1201 aacttcccgatc tctacagttt ccacaatggc atcctgaggc aagaaatgcc tctccctctcc
 1261 caggactgcc actatgaagg ctacatggaa ggggtgccc gctccttgc ttctgtcaac
 1321 atctgttca ggcctcagggg ggtttgtatt aaagggaaa catcctatgg cattgagccc
 1381 atgctcttcc cccaaaaactt tgaacatgtc ctctacacca tggagcatca gcctgtggc
 1441 tcctgcagtgc tcactccaa agacagccct ggggacacca gccatccacc aaggagcagg
 1501 aagcccgatc acctactggt tctgactgac tgggtgtcac acaccaagta tggggatgt
 1561 tttgtgggtgg tcaaccacca ggggttccag atgtggggca gtaacatcaa cgagacggc
 1621 caggcgtaa tggacatcat tgctctggcc aacagcttca cttaggggat aaacacagag
 1681 gtgggtctgg tgggccttggaa aatctggaca gggggggacc cgatagaggt cccagtggac
 1741 ctgcagacca cactcaggaa ttcaacttc tggagacagg agaaactcgt gggccgggtc
 1801 aggacacgtg tggcacactt gategtcggtt catgeccag gagagaacga gggccaggcg
 1861 ttctccgtg gtgcctgtt ggggtgagttt gcccggccg tggaggcctt ccatcatgaa
 1921 gatgtctcc tggcgtggc ttcatggcc cacgactcg ggcacaacct gggatccag
 1981 cacgaccacc cgacccgtcactt ctgtggccc aagacttct gcctcatgg tgagaagatc
 2041 ggtaaggaca gtggctca gcaactgcagc tctgaccactt ccctccgtt cctccatgac
 2101 cacagagggg cgtgcctgtc tgatgaccc gggcgccaga gcccgcattcg cagagctgcc
 2161 aatttgtggaa atgggtgggt ggaggactt gaggagtgtg actgcggcag tgactgtgac
 2221 agtcaccctgt gctgttcggc aacatgtac cttaaggagg gtgcgcagt cagtggggaa
 2281 ctctgtctc acaactgtac attcacaaagaa aaggaggact tatgcctgtcc tgctgaggat
 2341 gtgtgtgacc ttcccggatc ttgtgacggc agtactcagg aatgccttc aaacagctac
 2401 atgcaggatg gcacacactg tgataggatt tattactgtc tgggggggtt gtgtaaagaaac
 2461 cctgataaac aatgttcaag gatctatggg tatttcgtt gatctgcacc tgaggaatgt
 2521 tacatccatc ttaataactaa gggcaaccgg tttggaaact gtggccatcc cactccgt
 2581 aacttcagat atgaaacatc ttccgatgg gatgtatccc gttggaaact ggtgtgtaca
 2641 gatgttagat acctgccccaa agtcaaaaccctt ctacactcactt ccctccatgg
 2701 gaggactggt gttggatgtt ggtgcctat aacatcacaatgatcccgatc tgacggagat
 2761 gtacagagcg gcacccctgt tggcccaaaac aaagtctgca tggagttat ctgcactgg
 2821 cgtgggggtgc tccactacaa ctgtgagccaa caggaaatgt gtcacggaa tggagtgtgc
 2881 aacaatttca agcaactgtca ctgcgtatgtt ggctcgccc tcctgtactg tagcagtcc
 2941 gggaaatgggg ggagtgtggaa cagtggccat gttggtaagc ccgctgtatcg acacttgagt
 3001 ctctcttttcc tggctgaaga gaggccat gataaaatgg aggtgaaga ggttaaacctg
 3061 aaagtgtatgg tgcttgggtt ccctatattt ctgtgttt tactgtgtgt tctaattgtct
 3121 atgcctacc tctgggtctga agtacaagaa gtagtatctc caccgaggatc atcagactt
 3181 tcgtcttcat catcctggtc agactctgac tctcagtgtaa gttttatata agatcctctc
 3241 atggatcatt gctatcgatg tcttggatgtt gcaggccat tttgcctaaag tggatttttag
 3301 ggcatgtgtc tcaatgtaaat gttgtggctataacttggt tggctcatct cagaaacaac
 3361 tggaaattata tcctgaatga tggtaaggaa tctaaatgtt ctaacttgcc ctgtcagctc
 3421 ctgttcataaa aatagaaggc attttaataa aatataaa (SEQ ID NO:67)

FIGURE 37A

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ADAM1 (XM_132370)

MSVAAAGRFASSLSSPQIRRIALKEAKLTPHIWAALHWNLGLR
LVPSVRVGILVLLIFLPSTFCDIGSVNNSYETVI PERLPGKGGKDPGGKVSYMILLMQ
GQKQLLHLEVKGHYPENNFPVSYHNGILRQEMPLLSQDCHYEGYMEGVPGSFVSVNI
CSGLRGVLIKEETS YGIEPM LSSKNFEHVLYTMEHQPVVSCSVPKDS PGDTSHPPRS
RKPD DLLVLTDWWSHTKYVEMFVVVNHQRFQM WGSNINETVQAVMDI I ALANS FTRGI
NTEVVLVGLEIWTEGDPIEV PVDLQTTLRN FNFWRQEKLVGRVRHDVAHLIVGHRPGE
NEGQAFLRGACSGEFAAAVEAFHHEDVLLFAALMAHELGHNLGIQHDHPTCTCGPKHF
CLMGEKIGKD SGFSNCSSDHFLRFLHDH RGAC LLDEPGRQSRMRR AANCNGVVEDLE
ECDCGSDCD SHPCCSPTCTLKEGAQCSEG LCCYNCTFKKGSLCRPAEDVCDLPEYCD
GSTQEC PANSYM QDGTQCDRIYYCLGGWCKNPDKQCSR IYGPARSAPEECYISVNTK
ANRGNGHPTSANFRYETCSDEDVFCGKL VCTDVR YLPKVKPLHSLLQV PYGEDWCW
SMDAYNITDV PDDGDVQSGTFCAPNKVCMEYICTGRGV LQY NCEPQEMCHGNGVCNNF
KHCHC DAGFAPPDCSSPGNGGSVDGPVGKPADRHL SLSFLAEESPDDKMEDEEVNLK
VMVLVVP IFLV VLLCCLMLIAYLWSEVQE VSPSSSESSSSWSDSDSQ (SEQ ID NO: 68)

FIGURE 37B

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TIM1 (NM_003254)

1 aggggcctta gcgtgccgca tcggcgagat ccagcgccca gagagacacc agagaaccca
61 ccatggcccc ctggagccc ctggcttctg gcattcctgtt gttgctgtgg ctgatagccc
121 ccagcaggcc ctgcacctgt gtcccacccc acccacagac ggcccttctgc aattccgacc
181 tcgtcatcag gcccaagtgc gtggggacac cagaagtc aa ccagaccacc ttataccagc
241 gttatagat caagatgacc aagatgtata aagggttcca agccttaggg gatgccgctg
301 acatccgggtt cgtctacacc cccgccccatgg agagtgtctg cgataacttc cacaggtccc
361 acaaccgcag cgaggagttt ctcattgctg gaaaactgca ggatggactc ttgcacatca
421 ctacctgcag tttcgtggct cccttggaca gcctgagctt agtcagcgc cggggcttca
481 ccaagaccta cactgttggc ttttggaaat gcacagtgtt tccctgttta tccatcccc
541 gcaaactgca gagtggcaact cattgttgtt ggacggacca gtcctccaa ggctctgaaa
601 agggcttcca gtccccgtcacttgccttgc tgcctcggga gccagggctg tgacactggc
661 agtccctgcg gtccccagata gcctgaatcc tgccctggagt ggaactgaag cctgcacagt
721 gtccacccctg ttccccactcc catctttctt ccggacaatg aaataaaagag ttaccaccca
781 gc (SEQ ID NO:69)

FIGURE 38A

TIM1 (NM_003254)

APFEPLASGILLLWLIAPSRACTCVPPHPQTAFCNSDLVIRA
FVGTPEVNQTTLYQRYEIKMTKMYKGFQALGDAADIRFYTPAMESVCGYFHRSHNR
EEFLIAKGKLQDGLLHITTCSFVAPWNSLSLAQRGGFTKTYTVGCEECTVFPCLSI
PC LQSGTHCLWTDQLLQGSEKGFQSRHLACLPREPGLCTWQSLRSQIA (SEQ ID NO:70)

FIGURE 38B

MUC1 (XM_053256)

1 cgctccacct ctcagaacgc cagcgccgtc ctgaatctgt tctgccccct ccccacccat
 61 ttcaccacca ccatgacacc gggcacccag ttcctttct tcctgctgct gtcctcaca
 121 gtgcttacag ttgttacagg ttctggcat gcaagctcta ccccagggtgg agaaaaggag
 181 acttcggcta cccagagaag ttcaagtccc agctctactg agaagaatgc tgtgagtatg
 241 accagcagcg tactctccag ccacagcccc gttcaggct cttccaccac tcagggacag
 301 gatgtcactc tggcccccgc cacggAACCA gttcagggtt cagctccac ctggggacag
 361 gatgtcacct cggtcccagt caccaggcca gcccgggct ccaccacccc gccagcccc
 421 gatgtcacct cagccccggc caacaagcgg gcccgggct ccaccgcccc cccagcccc
 481 ggtgtcacct cggcccccggc caccaggccc gcccgggct ccaccgcccc cccagcccc
 541 ggtgtcacct cggcccccggc caacaggccc gcctgggct ccaccgcccc tccagtccac
 601 aatgtcacct cggcctcagg ctctgcatca ggctcagtt ctactctgtt gcacaacggc
 661 acctctgcca gggctaccac aaccccagcc agcaagagca ctccattctc aattcccagc
 721 caccactctg atactcctac cacccttgcc agccatagca ccaagactga tgccagtagc
 781 actcaccata gcacggtaacc tcctctcacc tcctccaatc acagcacttc tccccagttg
 841 tctactgggg tctctttctt tttcctgtct tttcacattt caaacctcca gtttaattcc
 901 tctctggaaatg atcccagcac cgactactac caagagctgc agagagacat ttctgaaatg
 961 ttttgcaga ttataaaaca agggggtttt ctggcctct ccaatattaa gttcaggcca
 1021 ggatctgtgg tggtaaaaaatt gactctggcc ttccgagaag gtaccatcaa tgcacccac
 1081 gtggagacac agttcaatca gtataaaaacg gaagcagccct ctcgatataa cctgacgatc
 1141 tcagacgtca gctgtggatgtga tgcgtccatt ctttctctg cccagtcgg ggctgggggtg
 1201 ccaggctggg gcatcgccct gctgggtgtg gtctgtgttc tgggtgcgt ggcattgtc
 1261 tatctcatttgc cttggctgt ctgtcagtgc cgccgaaaga actacggca gctggacatc
 1321 tttccagccc gggataaccta ccattctatg agcgagttacc ccacctacca caccatggg
 1381 cgctatgtgc cccctagcag taccgtatgt agccctatg agaagggttc tgcaggtaat
 1441 ggtggcagca gctcttta cacaacccca gcagtgccag ccacttctgc caacttgtag
 1501 gggcacgtcg cccgctgagc tgagtggcca gccagtgccttccacttca ctcaggttct
 1561 tcagggccag agccctgtca ccctgtttgg gctgggtggc tgggagttca ggtgggctgc
 1621 tcacagcctc cttcagagggc cccaccaatt tctggacac ttctcagtttgcgt gttggaaagctc
 1681 atgtggggccc ctgagggttc atgcctggga agtgggtgtgg tggggctcc caggaggact
 1741 ggcccgaga gcccctgagat agcggggatc ctgaactgga ctgaataaaa cgtggctcc
 1801 cactg (SEQ ID NO: 71)

FIGURE 39A

MUC1 (XM_053256)

MTPGTQSPFFLLLLLTVLTVVTGSGHASSTPGGEKETSATQRSS
 VPSSTEKNASMTSSVLSSHSPGSGSTTQGQDVTLAPATEPASGSAAATWGQDVTSVP
 VTRPALGSTTPPAHDVTSAPDNKRARGSTAPPAHGVTSAAPDTRPAPGSTAPPAHGVT
 APDNRPALGSTAPPVHNVTSAAGSASGSASTLVHNGTSARATTTPASKSTPFSIPSHH
 SDTPTTLASHSTKTDASSTHSTVPPLTSSNHTSPQLSTGVSFVLSFHISNLQFNS
 SLEDPSTDYYQELQRDISEMFLQIYKQGGFLGLSNIKFRPGSVVVQLTLAFREGTINV
 HDVETQFNQYKTEAASRYNLTISDVSDVPFPFSAQSGAGVPGWGIALLVLVCVLVA
 LAIVYLIALAVCQCRRKNYQQLDIFPARDTYHPMSEYPTYHTHGRYVPPSSTDRLSPYE
 KVSAGNGGSSLSYTNPAVAATSANL (SEQ ID NO: 72)

FIGURE 39B

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CEA (NM_004363)

1 ctcagggcag agggaggaag gacagcagac cagacagtca cagcagcctt gacaaaacgt
 61 tcctgaaact caagctctc tccacagagg aggacagagc agacagcaga gaccatggag
 121 tctccctcg cccctccccca cagatggtc atcccctggc agaggctcct gtcacagcc
 181 tcacttctaa cttctggaa cccgcccacc actgccaagc tcactattga atccacgccc
 241 ttcaatgtcg cagaggggaa ggaggtgctt ctacttgtcc acaatctgcc ccagcatctt
 301 tttggctaca gctggtacaa aggtgaaaga gtggatggca accgtcaaata tatagatata
 361 gtaataggaa ctcacaacaagc taccccaagg cccgcataca gtggtcgaga gataatatac
 421 cccaatgcatt cctgtctgat ccagaacatc atccagaatg acacaggatt ctacacccta
 481 cacgtcataa agtcagatct tgtgaatgaa gaagcaactg gccagttccg ggtatacccg
 541 gagctgccc a gcccctccat ctccagcaac aactccaaac ccgtggagga caaggatgct
 601 gtggccttca cctgtgaacc tgagactcg gacgcaacct acctgtggtg ggtaaacaat
 661 cagagccctcc cggtcagtcc caggctgcag ctgtccatg gcaacaggac cctcactcta
 721 ttcaatgtca caagaaatgaa cacagcaagc tacaatgtg aaacccagaa cccagtgagt
 781 gccagcgcga gtgattcaat catctgaat gtcctctatg gccggatgc cccaccatt
 841 tcccccttaa acacatctt cagatcagg gaaaatctga acctctctg ccacgcagcc
 901 tctaaccac ctgcacagta ctcttggttt gtcaatggga ctttccagca atccacccaa
 961 gagctttta tcccccaacat cactgtgaat aatagtggat cttatacgta ccaagccat
 1021 aactcagaca ctggcctcaa taggaccaca gtcacgacga tcacagtcta tgcagagcca
 1081 cccaaaccct tcatcaccag caacaactcc aaccccgatgg agatgagga tgctgttagcc
 1141 ttaacctgtg aacctgagat tcagaacaca acctacctgt ggtggtaaa taatcagagc
 1201 ctccccgtca gtcggcgggtt gcagctgtcc aatgacaaca ggaccctcac tctactcgt
 1261 gtcacaaggaa atgatgttagg accctatgat tggatggatcc agaacgaatt aagtggtagc
 1321 cacagcgacc cagtcatctt gaatgtcctc tatggcccg acgacccccc cattttcccc
 1381 tcatacacctt attaccgtcc aggggtgaac ctcagccctt cctgccatgc agcctcta
 1441 ccacctgcac agtattcttg gctgattgtt gggaaatcc agcaacacac acaagagctc
 1501 tttatcttca acatcactga gaagaacago ggactctata cctgcccaggc caataactca
 1561 gccaggggcc acagcaggac tacagtcaag acaatcacag tctctgcggg gctgcccagg
 1621 ccctccatctt ccagcaacaa ctccaaaccc gtcggaggaca agatgctgt ggccttcacc
 1681 tgtgaacctg aggttcaggaa cacaacctac ctgtgggggg taaatggta ggcctccca
 1741 gtcagtccttca ggttcaggat gtccaaatggc aacaggaccc tcactctatt caatgtcaca
 1801 agaaatgacg caagagccat tggatgtgg atccagaact cagttagtgc aaaccgcagt
 1861 gacccagtca ccctggatgt ccttatggg ccggacacccc ccatcatttc ccccccagac
 1921 tcgtcttacc ttccgggggg gaaacctcaac ctctcctgcc actcggcctc taaccatcc
 1981 ccgcaggattt cttggcgatcat caatggata ccgcaggaaac acacacaagt tcttttatt
 2041 gccaaaatca cgccaaatataa taacgggacc tatgcctgtt ttgtctctaa cttggact
 2101 ggcgcataa attccatagt caagagcattt acgtctctg catctggaaac ttctctgtt
 2161 ctctcagctg gggccactgtt cggcattcatg attggagtgc tggtgggggt tgctctgata
 2221 tagcagccctt ggttagtgc ttcatattca ggaagactga cagttgttt gcttcttctt
 2281 taaagcattt gcaacagcata cagtctaaaa ttgcctttt accaaggata tttacagaaa
 2341 agactctgac cagagatcga gacccatccta gccaacatcg taaaacccca tctctactaa
 2401 aaataaaaaa atgagctggg cttggggcg cgcacctgtt gtcggcgtt ctcggaggc
 2461 tgaggcaggaa gaaatcgctt aacccggggatgg gttggatgg cagttagccc agatcgacc
 2521 actgcactcc agtctggcaa cagagcaaa ctccatctca aaaagaaaaag aaaagaagac
 2581 tctgacccatgt actcttgaat acaagttct gataccactg cactgtctga gaattccaa
 2641 aactttaatg aactaactga cagttcatg aaactgtcca ccaagatcaa gcagagaaaa
 2701 taatttaattt catggactt aatgaaactt tgaggattgc tgattttta aatgtctt
 2761 ttccccagatt tcaggaaact ttttttttttaaagctatcc actcttacag caatttgata
 2821 aaatataactt ttgtgaacaa aaattggagac atttacattt tctccctatg tggtcgtcc
 2881 agacttggga aactattcat gaatattat attgtatggt aatatagttt ttgcacaatg
 2941 tcaataaaaaa tctgtctttt gtataacaga aaaa (SEQ ID NO:73)

FIGURE 40A

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CEA (NM_004363)

MESPSAPPHRCIPWQRLLLTLASLLTFWNPPTTAKLTIESTPPN
VAEGKEVLLLHVHNLQPQHLFGYSWYKGERVDGNRQIIGYVIGTQQATPGPAYSGREIIY
PNASLLIQNIIQNDTGFYTLHVIKSDLVNEEATGQFRVYPELPKPSISSNNNSKPVEDK
DAVAFTCEPETQDATYLWWVNNQSLPVSPRLQLSNGNRTLTFNVTRNDTASYKCETQ
NPVSARRSDSVILNVLYGPDAPTISPLNTSYRSGENLNLSCHAASNPPAQYSWFVNGET
FQQSTQELFIPNITVNNSGSYTCQAHNSDTGLNRTTVTTITVYAEPPKPFITSNNNSNP
VEDEDAVALTCEPEIQNNTYLWWVNNQSLPVSPRLQLSNDNRTLTLGVTRNDVGPYE
CGIQNELSVDHSDPVILNVLYGPDDPTISPYTYRPGVNLSLSCHAASNPPAQYSWL
IDGNIQQHTQELFISNITEKNNSGLYTCQANNSASGHSRTTVKTITVSAELPKPSISSN
NSKPVEDKDAVAFTCEPEAQNTTYLWWVNGQSLPVSPRLQLSNGNRTLTFNVTRNDA
RAYVCGIQNSVSANRSDPVTLVLYGPDTPIISPPDSSYLSGANLNLSCHASNPSPO
YSWRINGIPQQHTQVLFIAKITPNNNGTYACFVSNLATGRNNNSIVKSITVSASGTSPG
LSAGATVGIMIGVLVGVALI (SEQ ID NO: 74)

FIGURE 40B

NCA (NM_002483)

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1 ctcctctaca aagaggtgga cagagaagac agcagagacc atgggacccc ctcagcccc
61 tccctgcaga ttgcattgtcc cctggaaaggaa ggtcctgctc acagcctcac ttctaaccctt
121 ctggAACCCa cccaccactg ccaagctcac tattgaatcc acgccattca atgtcgacAGA
181 ggggaaggag gttcttctac tcgcccacaa cctgccccag aatcgatTTG gttacAGCTG
241 gtacAAAGGC gaaAGAGTGG atggcaacAG tctaattgtA ggatATgtAA taggaACTCA
301 acaagCTACC ccAGGGCCCG catacAGTGG tcgagAGACA atataACCCCA atgcATCCCT
361 gctgatCCAG aacGTcACCC agaatGACAC aggattCTAT accCTACAAG tcataAAAGTC
421 agatCTTGTG aatGAAGAAG caACCGGACA gttccatGTA tACCCGGAGC tgCCCAAGGCC
481 ctccatCTCC agcaacaACT ccaACCCCCT ggaggACAAg gatGCTGTGG cttCACCTG
541 tgaacctgag gttcagaACA caacCTACCT gtggTggta aatggTCAGA gcctCCCGGT
601 cagtcccagg ctgcAGCTGT ccaatGGCAA catgaccCTC actCTACTCA gcgtcaAAAG
661 gaacgatgca ggatCCTATG aatgtGAAAT acagaACCCa gcgAGTgCCA accGCAgTgA
721 cccagtcacc ctGAATGTCC tctatGGCCc agatgtCCCC accatttCCC cctcaaAGGC
781 caattaccGT ccAGGGGAAA atctGAACCT ctccTgCCAC gcAGCCTCTA accCACCTGC
841 acagTACTCT tggTTTATCA atgggACGTT ccAGCAATCC acacaAGAGC tctttatCCC
901 caacatCACT gtGAATAATA gcggatCCTA tatgtGCCAA gcccataACT cagCCACTGG
961 cctcaatAGG accACAGTCA cgatGATCAC agtCTCTGGA agtgCTCTG tcctCTCAGC
1021 tgtggccacc gtcggcatca cgattggagt gctggccagg gtggCTCTGA tatAGCAGCC
1081 ctggTGTATT ttcgatATT cagGAAGACT ggcagATTGG accAGACCTT gaattttCT
1141 agtCCTCCA atCCCATTT atCCCATGGA accACTAAAA acaAGGTCTG ctCTGCTCCT
1201 gaAGCCTAT atGCTGGAGA tggACAACtC aatGAAAATT taaAGGGAAA accCTCAGGC
1261 ctgagGTGTG tgCCACTCAG agACTTCACC taACTAGAGA cAGTCAAACt gcaaACCATG
1321 gtgAGAAATT gacGACTTCA cactATGGAC agCTTTCCC aqAGATGTCAA aacaAGACTC
1381 ctcatCATGA taaggCCTT ACCCCCTTT aatttGTCCT tgCTTATGCC tgcCTCTTC
1441 gcttggcagg atgatGCTGT cattAGTATT tcacaAGAAG tagCTTCAGA gggtaACTTA
1501 acagAGTgTC agatCTATCT tgtCAATCCC aacGTTTAC atAAAATAAG agatCCTTA
1561 gtgcACCCAG tgACTGACAT tagCAGCATE ttAAACACAG ccgtGTGTTc aaATGTACAG
1621 tggTCCTTT cagAGTGGa cttCTAGACT cacCTGTTCT cactCCCTGT ttAAATTCAA
1681 cccAGCCATG caatGCCAA taATAGAATT gctCCCTACC agCTGAACAG ggAGGAGTCT
1741 gtgcAGTTc tgACACTTGT tggtaACAT ggCTAAATAC aatGGGTATC gCTGAGACTA
1801 agttGTAGAA attaACAAAT gtgCTGCTTG gttAAAATGG ctacACTCAT ctgACTCATT
1861 ctTTATTCTA ttttagTTGG tttgtatCCT gcctaAGGTG cgtAGTCCAA ctCTTGGTAT
1921 tacCCCTCA atAGTCATAc tagTAGTCAc actCCCTGGT gtAGTGTATT ctCTAAAGC
1981 ttAAATGTC tgcatGCAGC cagCCATCAA atAGTGAATG gtCTCTCTT ggCTGGAATT
2041 acaAAACTCA gagAAATGTG tcATCAGGAG aacATCATAA cccATGAAGG atAAAAGCCC
2101 caaaTGGTGG taACTGATAA tagCACTAAT gcttAAAGAT ttggTCACAC tctCACCTAG
2161 gtgAGCGCAT tgAGCCAGTG gtgCTAAATG ctacATACTC caACTGAAAT gttAAAGGAAG
2221 aagatAGATC caaaaaaaaaaaaaaaa (SEQ ID NO:75)

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FIGURE 41

P2000R1

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NCA (NM_002483)

MGPPSAPPRLHVPWKEVLLTASLLTFWNPPTTAKLTIESTPFPN
VAEGKEVLLLALHNLQPQNRIGYSWYKGERVDGNSLIVGYVIGTQQATPGPAYSGRETIY
PNASLLIQNVTQNDTGFYTLQVIKSDLVNEEATGQFHVYPELPKPSISSIONNSNPVEDK
DAVAFTCEPEVQNTTYLWWVNGQSLPVSPRLQLSNGNMTLTLLSVKRNDAGSYECEIQ
NPASANRSDPVTLNVLYGPDVPTISPSKANYRPGENLNLSCHAASNPPAQYSWFINGT
FQQSTQELFIPNITVNNSGSYMCQAHNSATGLNRTVTMITVSGSAPVLSAVATVGIT
IGVLARVALI (SEQ ID NO: 76)

FIGURE 41B

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Follistatin (NM_006350)

1 gtcctcgcc cgcgcctgc ccccaggatg gtccgcgcga ggaccaggcc gggtgggctt
61 tgcctcctgc tgctgctgct ctgccagttc atggaggacc gcagtgccta ggctgggaac
121 tgctggctcc gtcaagcgaa gaacggccgc tgccagggtcc tgtacaagac cgaactgagc
181 aaggaggagt gctgcagcac cggccggctg agcaccttgt ggaccgagga ggacgtgaat
241 gacaacacac tcttcagaatg gatgatttc aacggggcg cccccaactg catccccgt
301 aaagaaaacgt gtgagaacgt ggactgtgga cctggggaaa aatgccgaat gaacaagaag
361 aacaaaacccc gctgcgtctg cgccccggat tggccaaca tcacctggaa gggtccagtc
421 tgcgggctgg atggggaaaac ctaccgcaat gaatgtgcac tcctaaaggc aagatgtaaa
481 gagcagccag aactggaaat ccagtaccaa ggcagatgt aaaaagacttg tcgggatgtt
541 ttctgtccag gcagctccac atgtgtggtg gaccagacca ataatgccta ctgtgtgacc
601 tggtaatcgga tttgcccaga gcctgcttcc tctgagaat atctctgtgg gaatgatgga
661 gtcacactact ccagtgcctg ccacctgaga aaggctaccc gcctgctggg cagatctatt
721 ggatttagcct atgagggaaa gtgtatcaaa gcaaaagtcct gtgaagatata ccagtgcact
781 ggtggggaaa aatgtttatg ggatttcaag gttgggagag gccgggttcc cctctgtgat
841 gagctgtgcc ctgacagtaa gtggatgag cctgtctgtg ccagtgacaa tgccacttat
901 gcccagcgagt gtgccatgaa ggaagctgcc tgctcctcag gtgtgctact ggaagtaaag
961 cactccggat cttgcaactg aatctgcccc taaaacctga gccattgatt cttcagaact
1021 ttctgcagtt tttgacttca tagattatgc tttaaaaaat ttttttaac ttattgcata
1081 acagcagatg ccaaaaacaa aaaaagcatc tcactgcaag tcacataaaa atgcaacgc
1141 qtaatatggc tgtatcagag ggcttgaaa acatacactg agctgcttct gcgctgttg
1201 tgtccgtatt taaaacaacag ctccccctgta ttccccccatc tagccatttc ggaagacacc
1261 gaggaagagg aggaagatga agaccaggac tacagcttc ctatatcttc tattcttagag
1321 tggtaaactc tctataagtg ttcagtgttc acatagcctt tggcaaaaaa aaaaaaaaaa
1381 aaaaaaa (SEQ ID NO:77)

FIGURE 42A

Follistatin (NM_006350)

MVRARHQPGGLCLLLLLLQFMEDRSAQAGNCWLRQAKNGRCQV
LYKTELSKEECCSTGRLSTSWEEDVNDNTLFKWMIFNGGAPNCIPCKETCENVDCGP
GKKCRMNKKNPKRCVCAPDCSNITWKGPVCGLDGKTYRNECALLKARCKEQPELEVQY
QGRCKKTCRDVFCPGSSTCVVDQTNNAYCVTCNRICPEPASSEQYLCGNDGVTYSSAC
HLRKATCLLGRSIGLAYEGKCIKAKSCEDIQCTGGKKCLWDFKVGRGRCSLCDELCPD
SKSDEPVVCASDNATYASECAMKEAACSSGVLLLEVKHSGSCN (SEQ ID NO: 78)

FIGURE 42B

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Claudin 1 (NM_021101)

1 gagcaaccgc agcttctagt atccagactc cagcgccgccc ccggggcgccg accccaaccc
 61 cgaccaggag cttctccagc ggcggcgccag cgagcagggc tccccgcctt aacttcctcc
 121 gcggggccca gccaccttcg ggagtccggg ttgcccaccc gcaaactctc cgcctctgc
 181 acctgccacc cctgagccag cgccggcgcc cgagcgagtc atggccaaacg cggggctgca
 241 gctgtggc ttcattctcg ccttcctggg atggatccgc gccatcgtca gcactgcct
 301 gccccagtgg aggatttaact cctatgccgg cgacaacatc gtgaccgccc aggccatgta
 361 cgaggggctg tggatgtcct gcgtgtcgca gagcacccgg cagatccagt gcaaagtctt
 421 tgacttccttg ctgaatctga gcagcacatt gcaagcaacc cgtgccttga tgggtgttgg
 481 catccttcctg ggagtgtatag caatcttgcg ggccaccgtt ggcataatgt gtatgaagt
 541 cttgaaagac gatgagggtgc agaagatgag gatggctgtc attgggggtt cgatatttct
 601 tcttgcaggc ctggcttatt tagttccac agcatggtat gcaaatagaa tcgttcaaga
 661 attctatgac cctatgaccc cagtcaatgc caggtacgaa ttgggtcagg ctcttcac
 721 tggctggct gctgcttc tctgccttgc gggaggtgcc ctactttgt gttcctgtcc
 781 cccaaaaaca acctttaacc caacaccaag gcccatacca aacactgcac cttccagcgg
 841 gaaagactac gtgtgacaca gaggccaaag gaaaaatca tggtaaaaca aaccgaaaat
 901 ggacatttgcg atactatcat taacatttagg accttagaa ttgggttatt gtaatctgaa
 961 gtatgttatt aaaaaacaaa caaacaaaaca aaaaacccat gtgttaaaat actcaatgt
 1021 aaacatggct taatcttatt ttatcttc tcccaatata aggagggaaat attttccat
 1081 ttgttattact gcttcccatt gagtaatcat actcaattgg ggaagggggt gtccttaaa
 1141 tatatataga tatgtatata catatgtttt tctttaaaa atagacagta aaataactatt
 1201 ctcattatgt tgatactagc atactaaaaa tatctctaaa ataggttaat gtatttaatt
 1261 ccatattgtat gaagatgtt attggatattttt ttcatttttc gtcataatata catatgtaa
 1321 cagtcaaata tcatttactc ttcttcatta gcttgggtg ctttgcac aagacatgc
 1381 ctaatttacc aaggatgaaat tcttcaattt cttcatgcgt gcccatttca tataacttatt
 1441 ttattttta ccataatctt atagcaattt catcgattt aagccattt ttgtttgtg
 1501 ttgcatttgt ctctatctcc tgaatctaacc acatttcata gctcataattt tagttctaa
 1561 agccaagaag aatttattac aaatcagaac ttggaggca aatctttctg catgaccaaa
 1621 gtgataaattt cctgttgacca ttcccacaca atccctgtac tctgacccat agcaatcttgc
 1681 ttgcatttgtaa aatattttgtt ccaattttgtt agctgcatttgc ttgtttttttt ggtgttgg
 1741 cacaacttta ttgattgaat tttaagctt cttatttttgc ttgtttttttt cccctaaact
 1801 acctttttgtt tcccccatttttca tttaatttttgc ttgtttttttt cttttttttt
 1861 tatatcttcc taataagggtt ttgttctgtt ttgttgcatttttgc ttgttgcatttttgc
 1921 gataatctgg tgacaaatattt tctctctgtt ttgttgcatttttgc ttgttgcatttttgc
 1981 tcttttttttctt atctgcacca ttgatatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2041 aatatttttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2101 ttatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2161 cttcatgttgc ttctactgcctt accagtctt ttccactgaa caaaacctac
 2221 acacataccct tcatgtgggtt cagtccttc ctctctctac cagtcatttttgc ttgttgcatttttgc
 2281 aaacccatgc acatacccttc atgtggctca gtccttcatttttgc ttgttgcatttttgc
 2341 attcttcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2401 ttccactgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2461 ggcatttgtt tctggagacc ttggattttgtt ttgttgcatttttgc ttgttgcatttttgc
 2521 gagcaaggca ttggctgtt ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2581 cctgatcttc ccacccatca ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2641 ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2701 acgtttttgtt ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2761 ttgccttaac cagtccttc atgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2821 ataagatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2881 aaacagatgtt ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 2941 atttttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3001 gctgttagctt ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3061 aactacacaa ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3121 ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3181 acatacatag ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3241 ttacaaaaaaa ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3301 atttttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3361 ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc ttgttgcatttttgc
 3421 aaaaaaggaa aaaaaaaaaaaa aaaaa (SEQ ID NO:79)

FIGURE 43A

Claudin 1 (NM_021101)

MANAGLQLLGFI LAFLGWIGAI VSTALPQWRIYSYAGDNI VT AQ

AMY EGLWMSCVS QSTGQI QCKVFD SLLNLS STLQATRALMVVGILLGVIAIFVATVGM

KCMK CLEDDEVQ KMRM A VIGGA I FLLA GLA ILVATA WYGN RIVQE FYDP MTPVNARYE

FGQALFTGWAASLCL LGGALLCCSPRKTTSYPTPRPYPKPAPSSGKD YV (SEQ ID NO: 80)

FIGURE 43B

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Claudin 14 (NM_012130)

1 gtttgcctca ctttcgtccca ggattgttaag ttccctgagg cctccccagt cctgcggAAC
61 tggctccggc tggcacctga ggagccgcgt gaccccgagg gcccaggGAAG ctgcggcgCT
121 ggcctaggca ggcagccgca ccatggccag cacggccgtg cagcttctgg gcttcctgCT
181 cagcttcctg ggcatggtgg gcacgttgc caccaccatc ctgcccact ggcggaggAC
241 agcgcacgtg ggcaccaaca tcctcacggc cgtgtcc tacGtggatggC tctggatggA
301 gtgtgtgtgg cacagcacAG gcatctacca gtgccagatc taccgatccc tgctggcgCT
361 gccccaaAGAC ctccaggctg cccgcgcct catggtcatac tcctgcctgc tctcgggcat
421 agcctgcGCC tgcgcgtca tcggatgaa gtgcacgcgc tgcccaagg gcacacccgc
481 caagaccacc tttgcacatcc tcggccggcac ccttcacGtgcgtgcAT
541 ggtggccgtc tcctggacca ccaacgacgt ggtgcagaac ttctacaacc cgctgctgCC
601 cagcggcatg aagtttgaga ttggccaggc cctgtacctg ggTTcatct cctcgtccCT
661 ctcgctcatt ggtggcaccc tgcttgcct gtccGtgcag gacgaggaccc cctacaggCC
721 ctaccaggCC ccggccaggG ccaccacgac cactgcaaac accgcacctg cctaccagCC
781 accagctGCC tacaAAAGACA atcggggcccc ctcaGtgcacc tcggccacgc acagcgggTA
841 caggctgaac gactacgtgt gagtccccac agectgcttc tcccctgggC tgctgtgggC
901 tgggtccccG gcgggactgt caatggaggc aggggttcca gcacaaagtt tacttctggg
961 caattttgt atccaaggaa ataAtgtgaa tgcaggaaa tgtctttaga gcacaggGC
1021 agagggggaa ataagaggag gagaaagctc tctataccaa agactgaaaa aaaaaatcCT
1081 gtctgtttt gtatttatta tatataatttA tgggggtgat ttgataacaa gttaatata
1141 aagtgacttg ggagtttgt cagtggggtt ggTTgtgat ccaggaataa accttgcggA
1201 tgtggctgtt tatgaaaaaa aaaaaaaaaaaa aaa (SEQ ID NO:81)

FIGURE 44A

Claudin 14 (NM_012130)

MASTAVQLLGFLLSFLGMVGTLITIILPHWRRTAHVGTNILTAV
SYLKGLWMECVWHSTGIYQCQIYRSLLALPQDLQAARALMVISCLLSGIACACAVIGM
KCTRCAKGTPAKTTFAILGGTFLFILAGLLCMVAWSWTNDVVQNFYNPLPSGMKFEI
GQALYLGFISSSLSLIGGTLLCLSCQDEAPYRPYQAPPRATTTANTAPAYQPPAAYK
DNRAPS VTSATHSGYRLNDYV (SEQ ID NO: 82)

FIGURE 44B

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Tenascin-R (NM_003285)

1 ccttggtttc cggtgcagat tcccacaact ccatgctgtg tgctgcaggc tggcctgaa
 61 cccagatctc tggctgagag gatggggca gatggggaaa cagtggttct gaagaacatg
 121 ctcatggcg tcaacctgtat ccttctggc tccatgtatca agccttcaga gtgtcagctg
 181 gaggtcacca cagaaagggt ccagagacag tcagtggagg aggagggagg cattgccaac
 241 tacaacacgt ccagcaaaga gcagcctgtg gtcttcaacc acgtgtacaa cattaacgtg
 301 cccttgaca acctctgtc ctcaggcata gaggcctctg ctgagcagga ggtgagtgca
 361 gaagacgaga ctctggcaga gtacatggc cagacccatc accacgagag ccaggtcacc
 421 ttacacaca ggatcaactt ccccaaaaag gcctgtccat gtgccagttc agcccagggt
 481 ctgcaggagc tgctgagccg gatcgagatg ctggagaggg aggtgtcggt gctgcgagac
 541 cagtgcacacg ccaactgtcg ccaagaaaagt gtcgcacag gacaactgga ctatatccct
 601 cactgcacgtg gccacggcaa cttagctt gactcctgtg gtcgcacatcg caacgaaggc
 661 tgggtggca agaattgcgc ggagccctac tgcccgtgg tgctgtccag ccgggggggtg
 721 tgggtggatg gccagtgcgt ctgtgacago gaatacagcg gggatgactg ttccgaactc
 781 cggtgcccaa cagactgcag ctcccggggg ctctgcgtgg acggggagtg tgcgtgtgaa
 841 gagecctaca ctggcgagga ctgoaggaa ctgaggtgccc ctggggactg ttggggaaag
 901 gggagatgtg ccaacgggtac ctgttatgc gaggaggct acgttggtga ggactgcggc
 961 cagcgcacgt gtctgaatgc ctgcacgtggg cgaggacaat gtgaggaggg gctctgcgtc
 1021 tgcgtgtgtt gctaccaggc ccctgtactc tcacgcattt cccctccaga ggacttgca
 1081 gtggctggta tcacgcacag gtccatttgc ctggaaatggg acggggcgat ggcagtgacg
 1141 gaatatgtga tctcttacca gccgacggcc ctggggggcc tccagctcca gcagcgggtg
 1201 cctggagatt ggagtgggtt caccatcgcg gagctggagc caggcttcac ctacaacatc
 1261 agcgcttacg ctgtcatttgc caacatcctc agccttcac tcaactgcca ggtggggacc
 1321 catcttcacca ctcctcaagg gctacaattt aagacgatca cagagaccac cgtggaggtg
 1381 cagtggagc ctttcttcat ttccttcgtt ggggtggaaa tcagcttcat tccaaagaac
 1441 aatgaagggg gagggtttgc tcagggtcccc agcgatgtt cgtcctttaa ccagacagga
 1501 ctaaaggctg gggaggaata cattgtcaat tggtggctc taaaagaaca ggccccgcgc
 1561 ccccttaccc tggccagcgt ctccacagtc attgacggcc ccacgcagat cctgggtcgc
 1621 gatgtctcggtt acaccgtggc ttttgtggag tggattcccc ctcgagccaa agtcgatttc
 1681 attctttgtt aatatggct ggtgggggg gaaggtggga ggaccacattt ccggctgcag
 1741 cttccctgtt gccaataactc agtgcaggcc ctgcggctt gtcggccata cgagggtgtca
 1801 gtcagtgccg tcccgaggagca acacgagac gattctgcca ccactcagg tacaacagag
 1861 atcgatgtccc ccaagaactt gcgagttgtt tctcgacacg caaccacgc tgacctcgag
 1921 tgggataaca gtgaagccga agttcaggag tacaagggtt tgacagcac cttgggggtt
 1981 gagcaataactt atgaggatgtt ggtccccagg ggcattggc caaccaccc ggcacccctg
 2041 acagatctgg tacctggcac tgatgtatgg gttggaaat tgcgcgtcat gaactcacag
 2101 caaaggctgc cagccacccat gaatgccagg actgaactt acgttcccc agacccatg
 2161 gtgacacgcct ctcggagac ctccatctcc ctcatgttgc ccaaggccag tggcccccatt
 2221 gaccactacc gaattaccctt tacccttcatc tctgggttgc ctcagaatg caccgttacc
 2281 aaggacagga ctcatacac actaacatgc cttaggcgtt gggcagagta catcatttcc
 2341 gtcactgtcg agaggggtcg gcagcagac ttggagttca ctgtggatgc tttcacaggc
 2401 ttccgtccca tctctcatc gcacttttc catgtgaccc tcccttcgtt gaacatca
 2461 tggagtgatc catctcccccc agcagacaga ctcatttttca actacagccc caggatgag
 2521 gaggaagaga tgatggaggt ctccctggat gcccaccaaga ggcacgtgtt cctgtggc
 2581 ctgcaaccac ccacagagta tattgttgc acacttgc tttgtggctg tccatggcact
 2641 gagccattt tgggtccat caccacagga attgatcccc caaaagacat cacaatttgc
 2701 aatgtgacca aggactcgtt gatggctcc tggagccctc ctgttgcattt tttcgattac
 2761 taccgagttt catatcgacc caccacatgc ggacgactt acactcagg ggtgccccac
 2821 actgtgacag aattcaccat caccacactt aaccacatgc ccaatacga aatcgcctc
 2881 aacagcgtgc gggcaggga ggaaagcggc cgcacatgtt ctttgcatac tttcgattac
 2941 gacaaccctg tggatctgtat tgcttaccaat atcaactccaa cagaaggccct gtcgcgtt
 3001 aaggcaccac tgggtggaggt ggagaactt gtcatttttca ttacacactt tgcagtcgt
 3061 ggagagacca tccttggatc cggagtcgtt gggaaatcc ggcgttggta cctgtttct
 3121 agcaccacactt atactgcac catgtatgc accaatggac ctctcaccac tggcaccatc
 3181 agcaccacactt ttctactt cctggaccctt cccggccaaacc tgacagccag tgaagtca
 3241 agacaaagtgc ccctgtatctc ctggcaggccccc cccaggccag agattgaaaa ttatgttt
 3301 acctacaaat ccaccgacgg aagccgcaag gagctgattt tggatgcaga agacacccctg
 3361 attcgactgg agggcctt gggaaacaca gactacacgg tgcctctgca ggcagcacag

FIGURE 45A

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3421 gacaccacgt ggagcagcat cacccacc ccttcacca caggaggccg ggtttccct
3481 catccccaa agtgcggca gcatttgatg aatggagaca ctgtgatgg gtttacccc
3541 atcttcctca atggggagct gagccagaaa ttacaagtgt actgtgatata gaccaccgac
3601 gggggcggt ggattgtatt ccagaggccg cagaatggcc aaactgattt tttccggaaa
3661 tgggctgatt accgtgttgg ctccggaaac gtggaggatg agttctggct ggggctggac
3721 aatacacaca ggatcacatc ccagggccgc tatgactgc gcgtggacat gcgggatggc
3781 caggaggccg cttcgccctc ctacgacagg ttctctgtcg aggacagcag aaacctgtac
3841 aaactccgca taggaagcta caacggact gcggggact ccctcagcta tcataagga
3901 cgcctttct ccacagagga tagagacaat gatgttgcag tgactaactg tgccatgtcg
3961 tacaaggag catggtgta taagaactgc caccggacca acctaattgg gaagtacggg
4021 gagtcaggc acagtcaagg catcaactgg taccatgg aaggccatga gttctccatc
4081 cccttgtgg aatgaagat gcgccttac aaccaccgtc tcatggcagg gaaaaacgg
4141 cagtccttac agttctgagc agtggggccgc tgcaagccaa ccaatattt ctgtcattt
4201 ttgttatttt ataatatgaa acaagggggg aggtaatag caatgtgtt tgcaacatat
4261 taagagtatg tgaaggaagc aggatgtcg caggaatccg ctggctaaca tctgcttt
4321 gtttctgctg ccctggagcc tgacccttag tctccattct ccctccctacc caggcctcct
4381 caacccac ctcctttccc accaaggagg agaagtagga agtttctta aagggccaat
4441 tcaaagccaa gtcgtgggt gcagattgtt atggtgacag gcacacacat ttttctaccc
4501 ttcttctgag atgtcctctg cttccaggt atttggatt ttgtcacagc ctgacatggc
4561 caggtctca cactggccca gagaaaaagag cctcagaag agagtttgc caacaatttcc
4621 cttaaaagg aaacagatca actacaccgc atcccaacaa cccaggttct ttcccttc
4681 tccttccttc ctcccttctc tcttcctgc cttccc (SEQ ID NO:83)

FIGURE 45B

Tenascin-R (NM_003285)

MGADGETVVLKNMLIGVNLILLGSMIKPSECQLEVTTERVQRQS
VEEEGGIANYNTSSKEQPVVFNHVYNINVPLDNLCSSGLEASAEQEVSaedetlaeYM
GQTSDHESQVTFTHRINFPKKACPCASSAQVLQELLSRIEMEREVSVLRDQCNA
QESAATGQLDYIPHCSGHGNFSFESCGCICNEGWFGN
CICDSEYSGDDCSELRCPTDCSSRGLCVDGEVC
ANGTCLCEEGYVG
AGISDRSIELEWDGPM
ISVYAVISN
PKNNEGGVIAQVPSDV
QILVRDV
GSRYEV
KVYVSTL
RTELDSP
PPADRL
VGSITTG
VTEFTITR
WKAPVGE
GTISTNF
AEDTWIR
TLSGVYP
TAGDSL
INWYHWKG
HEFSIPF
VEMKMR
PYNHRL
MAGRKR
QSLQF (SEQ ID NO: 84)

FIGURE 45C

1 aaaggggcaa gagctgagcg gaacaccggc ccgcccgtcg ggcagctgct tcacccctct
61 ctctgcagcc atggggctcc ctcgtggacc tctcgcgtct ctccctcctt tccagggttt
121 ctggctgcag tgccggccct ccgagccgtg cggggcggtc ttcaaggagg ctgaagtgc
181 cttggaggcg ggaggcgccg agcaggagcc cgccaggccg ctggggaaag tattcatggg
241 ctgccctggg caagagccag ctctgttag cactgataat gatgacttca ctgtgcgaa
301 tggcgagaca gtccaggaaa gaaggtaact gaaggaaagg aatccattga agatctccc
361 atccaaacgt atcttacgaa gacacaagag agattgggtg gttgtccaa tatctgtccc
421 taaaaatggc aagggtccct tcccccaagag actgaatcag ctcaagtcta ataaagatag
481 agacaccaag attttctaca gcatcacggg gccggggca gacagccccct ctgagggtgt
541 cttcgctgta gagaaggaga caggctgggtt gtgttgaat aagccactgg accggggagga
601 gattgccaag tatgagctct ttggccacgc tgtgtcagag aatggtgccct cagtggagga
661 ccccatgaac atctccatca tcgtgaccga ccagaatgac cacaagccca agtttaccca
721 gacacaccccg cgagggagtg tcttagaggg agtcctacca ggtacttctg tgatgcaggt
781 gacagccacg gatgaggatg atgcccatac cacctacaat ggggtgggtt cttactccat
841 ccatagccaa gaaccaaagg acccacacga cctcatgttc accattcacc ggagcacagg
901 caccatcage gtcatctcca gtggcctgga cccggaaaaaa gtccctgagt acacactgac
961 catccaggcc acagacatgg atggggacgg ctccaccacc acggcagtgg cagtagtgg
1021 gatccttgat gccaatgaca atgctccat gttgaccacc cagaagtacg aggccccatgt
1081 gcctgagaat gcagtggcc atgagggtca gaggctgacg gtcactgtac tggacgc
1141 caactcacca gctggcgtg ccacctaccc tatcatggg ggtgacgacg gggaccattt
1201 taccatcacc acccaccctg agagcaacca gggcatcctg acaaccaggaa agggtttgg
1261 ttttgaggcc aaaaaccaggc acaccctgtc cttgaagtg accaacgagg ccccttttgt
1321 gctgaagctc ccaacctcca cagccaccat atgggtccac gtggaggatg tgaatgaggc
1381 acctgtgtt gtcccaccc ccaaagtctg tgaggtccag gagggcatcc ccactgggaa
1441 gcctgtgtgt gtctacactg cagaagaccc tgacaaggag aatcaaaaaga tcagctaccg
1501 catcctgaga gaccagcag ggtggcttagc catggaccacc gacagtgggc aggtcacagg
1561 tgtggcacc ctcgaccgtg agatgagca gttgtgagg aacaacatct atgaagtcat
1621 ggtcttggcc atggacaatg gaagccctcc caccactggc acgggaaccc ttctgctaac
1681 actgattgat gtcaatgacc atggcccaagt ccctgagcccg cgtcagatca ccattctgca
1741 ccaaaggccct gtgcgcagg tgctgaacat cacggacaaag gacctgtctc cccacaccc
1801 cccttccag gcccagctca cagatgactc agacatctac tggacggcag aggtcaacga
1861 ggaagggtgac acagtggctc tgccttgaa gaagttccctg aagcaggata catatgacgt
1921 gcaccttctc ctgtctgacc atggcaacaa agagcagctg acgggtatca gggccactgt
1981 gtgcgactgc catggccatg tcgaaacctg ccctggacc tggaaaggag gtttcatcc
2041 ccctgtgtc gggctgtcc tggctctgt gttcctccctg ctggctgtc ttttgttgg
2101 gagaagaagaag cggaaagatca aggagccctt cctactccca gaagatgaca cccgtgacaa
2161 cgtcttctac tatggcgaag aggggggtgg cgaagaggac caggactatg acatcaccc
2221 gctccaccga ggtctggagg ccaggccggc ggtggttctc cgcaatgacg tggcacc
2281 catcatcccg acaccatgt accgtccctcg gccagccaaac ccagatgaaa tcggcaactt
2341 tataattgag aacctgaaagg cggctaacac agacccacca gccccccct acgacaccc
2401 cttgggtgtc gactatgagg gcagcggctc cgacgcccgc tccctgagct ccctcaccc
2461 ctccgcctcc gaccaagacc aagattacga ttatctgaac gagtggggca gccgcttca
2521 gaagctggca gacatgtacg gtggcggggc ggacgactag gcccgtcgcc tgcagggtg
2581 gggaccaaac gtcaggccac agagcatctc caaggggtct cagttccccc tttagtgc
2641 gacttcggag cttgtcagga agtggccgta gcaacttggc ggagacaggc tatgagctg
2701 acgttagagt gttgtctcc ttagccttc agatggagg aatgtggca gtttgactt
2761 agcactgaaa acctctccac ctggccagg gttgcctca gggccaaagg tccagaagcc
2821 tcttacctgc cgtaaaatgc tcaaccctgt gtcctggcc tgggcctgct gtgactgacc
2881 tacagtggac tttctctctg gaatggaaacc ttcttaggccc tcctggtgca acttaattt
2941 ttttttaat gctatcttca aaacgttaga gaaagttctt caaaagtgc gcccagagct
3001 gctggccca ctggccgtcc tgcatcttg gttccagac ccaatgcct cccattcgga
3061 tggatctctg cgttttata ctgagtgac cttaggtgccc ctttattttt tattttcc
3121 gttgcgttgc tatacatgaa gggtgaggac aatcggttat atgtactaga acttttttat
3181 taaaqaaaact tttcccaaaaa (SEQ ID NO:85)

FIGURE 46A

CAD3 (NM-001793)

MGLPRGPLASLLLLQVCWLQCAASEPCRAVFREAEVTLEAGGAE
QEPGQALGKVFMGCPGQEPAFLSTDNDDFTVRNGETVQERRSLKERNPLKIFPSKRIL
RRHKRDWVVAPISPENGKGPFPQRNLKSNKDRDTKIFYSI TGPGADS PPEGVFAV
EKETGWLLLNKPLDREEIAKYELFGHAVSENGASVEDPMNISI I VTDQNDHKPKFTQD
TFRGSVLEGVLPGTSVMQVTATDEDDAI YTNGVVAYSIH SQEPKD PHDL MFTI HRST
GTISVISSGLDREKVPEYTLTIQATDMGDGSTTTAVAVVEILDANDNAPMFDPQKYE
AHVPENAVGHEVQRLTVTDLDAPNSPAWRATYLI MGGDDGDHFTITTHPESNQGILTT
RKGLDFEAKNQHTLYVEVTNEAPFVLKLPTSTATIVVHVEDVNEAPVFVPPSKVVEVQ
EGIPTGEPVCVYTAEDPDKENQKISYRILRDPAGWLAMDPDSGQVTAVGTL DREDEQF
VRNNIYEVMVLAMDNGSPPTTGTLTTLIDVNDHGPVPEPRQITICNQSPVRQLN
ITDKDLSPHTSPFQAQLTDDSDIYWTAEVNEEGDTVVLSLKKFLKQD TYDVHLSLSDH
GNKEQLTVIRATVCDCHGHVETCPGPWKGGFILPVLGAVLALLFLLLVL LVRKKRK
IKEPLLPEDDTRDNVFYYGEEGGGEEDQDYDITQLHRGLEARPEVVL RNDVAPTIIP
TPMYRPRPANPDEIGNFI IENLKAANTDPTAPPYDTLLVFDYEGSGSDAASLSSLTSS
ASDQDQDYDYLNEWGSRFKKLADMYGGGEDD (SEQ ID NO: 86)

FIGURE 46B

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CONT (NM_001843)

1 gctgtgccgc accgaggcga gcaggagcag ggaacaggtg ttaaaaatta tccaaactgcc
 61 atagagctaa attctttttt ggaaaattga accgaacttc tactgaatac aagatgaaaa
 121 tgtgggtgct ggtcagtcat cttgtgataa tatctattac tacctgttta gcagagttt
 181 catggtagat aagatatggt catggagtt ctgaggaaga caaaggattt ggaccaattt
 241 ttgaagagca gccaatcaat accatttac cagaggaatc actggaagga aaagtctcac
 301 tcaactgttag ggcacgagcc agcccttcc cggttacaa atggagaatg aataatgggg
 361 acgttgatct cacaagtgtat cgatacagta tggtaggagg aacacccgtt atcaacaacc
 421 ctgacaaaaca gaaagatgtt ggaatatact actgttttagc atctaataac tacggatgg
 481 tcagaagcac tgaagcaacc ctgagcttgc gatatcttgc tcctttccca cctgaggaac
 541 gtcctgaggt cagagtaaaa gaaggaaag gaatgggtct tctctgtgac cccccatacc
 601 atttttccaga tgatcttagc tatecgcttgc ttcttaatga atttctgtt tttatcacaa
 661 tggataaaacg gcgatgttgc tctcagacaa atggcaatct ctacatttgc aatgttgg
 721 ctccgacaa aggcaattat tcctgcttgc ttccagtc ttcttattaca aagagcgtt
 781 tcagcaaattt catcccactc attccaatac ctgaacgaac aacaaaacca tatcctgtg
 841 atattgttagt tcagttcaag gatgtatatg cattgtatggg cccaaatgtt acctttagat
 901 gttttgcact tggaaatctt gttccggata tcggatggcg gaaggttcta gaaccaatgc
 961 caagcactgc tgagatttagc acctctgggg ctgttcttac gatcttcaat attcagctag
 1021 aagatgaagg catctatgaa tggaggctg agaacattag agaaaaggat aaacatcaag
 1081 caagaattta tggtaaagca ttcctgttgc gggtagaaaca catcaatgac acagagggtgg
 1141 acataggcag tgatctctac tggccttgc tggccacagg aaagcccatc cctacaatcc
 1201 gatgggtgaa aaatggatatac gcgatcata aaggggaaattt aagactgttat gatgtgactt
 1261 ttgaaaatgc cggaatgtat cagtcatacg ctgaaaacac atatggagcc atttatgcaa
 1321 atgctgagttt gaagatcttgc gcgatggctc caacttttgc aatgaatccct atgaagaaaa
 1381 agatccttgc tgctaaaggtt ggaagggttgc taattgtatg caaacctaaa gctgcaccga
 1441 aaccaaagttt ttcatggatg aaagggacag agtggcttgc caatagcagc agaataactca
 1501 tttggaaaga tggtagcttgc gaaatcaaca acattacaag gaatgtatggg ggtatctata
 1561 catgcttgc agaaaataac agagggaaag ctaatagcagc tgaaccctt gttatcacag
 1621 atcctacgcg aattatattt gccccatata atgcccataat cacatgttgc gaaaacgc
 1681 ccatgcagtgc tgctgcgtcc tttgatcttgc ctttgcgttccatcacatc tggtocttca
 1741 atggctatgtt gatcgatattt aacaaaagaga atattcacta ccagaggaat tttatgtgg
 1801 attccaatgg gaaattacta atccggaaatg cgcagctgaa acatgttgcg agatacacat
 1861 gcactgccc gacaatttgc gacaatttgc cagtttcgc tgacccgttgc gtgagggcc
 1921 ctccaggccc tccagggttgc ctgagaatag aagacatttgc agccacttgc gtggacttca
 1981 cttggagccg tggtagcttgc aatcatagtc ctatcttacatcactatc cagaccaaga
 2041 ctatcttgc agatgtactgg aaagatgcaaa agacagatcc cccaaattt gaaaggaaata
 2101 tggaggcgc aagacgcgtgc gacttaatcc catggatggc gtatgttgc cgcgtggtag
 2161 caaccaatac actgggttgc ggagagccc gtataccatc taacagaattt aaaacagacg
 2221 gtgctgcacc aatgtggcttgc ctttgcgttgc taggagggtgg agtggaaaga aacagagac
 2281 tgaccataac atggggcgc tttgtcaagaa aataccacta tgcaacaaat tttgggttaca
 2341 tagtgcatt taagccatattt gatggagaag aatggaaaaaa agtcacatgtt actaatcctg
 2401 atactggccg atatgtccat aaagatggaaat ccatgagccc ttccactgca tttcaagtt
 2461 aagtcaaggc cttcaacaaac aaaggagatg gacccatcagc cctagtagca gtcattaaat
 2521 cagcacaaga cgctccccatc gaagccccaa cagaagtagg tgaaaatgtt ttatcattt
 2581 ctggatatc tggatcttgc gaaatgtttt tagaaaaat agtggaaaggc tatcagatcc
 2641 ggtatgggc tgcccatgac aaagaagaag ctgcaacacag agtcaatgc accagccaag
 2701 agtactcgcc caggctcgatc aacccatcgc cagacacccaa gtatgttata gaaatgggg
 2761 cctgcaatag tggatgggttgc ggacccatcgc tgacatgttgc tgaggcttgc accaagaaag
 2821 cacctcttag ccagcctca aggatcatca gttcgttgc gtcgtggatc cgctatata
 2881 tcacccatggc tcatgtgcgttgc gcaatcatca atgaatctac agtgcacgggataaaaggttgc
 2941 tctacagacc tggatggccatc catgtggca agtgcgttgc aactcacaat cactccatag
 3001 aagtccaaat ccccaatggat ggagaatgc ttgtggaggt tcgcgcgcac agtgcgtggag
 3061 gagatggatg ggtgttgc tttttttttt caggtgcacc caccctatcc ccaagtcttc
 3121 tcggcttact gtcgttgc tttttttttt tttttttttt ggaatttgc atgtgttgc
 3181 acagctgctg ttccatccc agctcagaag acacccttca accctggat gaccacaatt
 3241 ccttccaaattt tctgcggcgc catctcaagc caaataaattt atactttaac aaacttca
 3301 actgatttac aacacacatg atgactgagg cattcggaa ccccttcatc caaaaagaaata
 3361 aactttaaa tggatataaa tgattttaa ctcgttccaa tatgccttataa accacttca
 3421 acctgat (SEQ ID NO:87)

FIGURE 47A

CONT (NM_001843)

MKMWLLVSHLVIISITCLAEFTWYRRYGHGVSEEDKGFGPIFE
EQPINTIYPEESLEGKVSLNCRARASPFPPVYKWRMNNGDVDLTSRYSMVGGNLVINN
PDKQKDAGIYYCLASNNGMVRSTEATLSFGYLDPPPEERPEVRVKEGKGMVLLCDP
PYHFPDDLSYRWLLNEFPVFITMDKRRFVSQTNGNLYIANVEASDKGNYSCFVSSPSI
TKSVFSKFIPLIPIPERTTKPYPADIVVQFKDVKYALMGQNVTLECFALGNPVPDIRWR
KVLEPMPTAESTSGAVLKIFNIQLEDEGIYECEAENIRGKDQHQARIYVQAFPEWV
EHINDTEVDIGSDLYWPCVATGKPIPTIRWLKNGYAYHKGELRLYDVTFENAGMYQCI
AENTYGAIYANAELKILALAPTFEMNPMBKILAAKGGRVIECKPKAAPKPKFWSK
GTEWLVNSSRILIWEDGSLEINNITRNDGGIYTCFAENNREGKANSTGTLVITDPTRII
LAPINADITVGENATMQCAASFDPALDLTFVWSFNGYVIDFNKENIHQRNFMLDSNG
ELLIRNAQLKHAGRYTCTAQTIVDNSSASADLVVRGPPGPGGLRIEDIRATSVALTW
SRGSDNHSPISKYTIQTKTILSDDWKDAKTDPPPIEGNMEAARAVDLIPWMEEYFRVV
ATNTLGRGEPSIPSNIKTDGAAPNVAPS DVGGGGGRNRELTITWAPLSREYHYGNMF
GYIVAFKPDFGEEWKKVTVTNPDTGRYVHKDETMS P STAFQVKVKAFNNKGDPYSLV
AVINSAQDAPSEAPTEVGVKVLSSSEISVHWEHVLEKIVESYQIRYWAHDKEEAANR
VQVTSQEYSARLENLLPDTQYFIEVGACNSAGCGPPSDMIEAFTKKAPP SQPPRIISS
VRSGSRYIITWDHVVALSNESTVTGYKVLYRPDGQHDGKLYSTHKHSIEVPIPRDGEY
VVEVRAHSDDGGDVVSQVKISGAPTLSPLSLLGLLLPAFGILVYLEF (SEQ ID NO: 88)

FIGURE 47B

Osteopontin (NM_000582)

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1 ctcctgtgt tggggagga tgtctgcagc agcattaaa ttctggagg gcttggttgt
61 cagcagcagc aggaggaggc agagcacagc atcgctggga ccagactcgt ctcaggccag
121 ttgcagcctt ctcagccaaa cgccgaccaa ggaaaactca ctaccatgag aattgcagtg
181 atttgcgttt gcctcttagg catcacctgt gccataccag ttaaacaggc tgattctgga
241 agttctgagg aaaagcagct ttacaacaaa taccagatg ctgtggccac atggctaaac
301 cctgacccat ctcagaagca gaatctccta gccccacaga cccttccaag taagtccaac
361 gaaagccatg accacatgga tgatatggat gatgaagatg atgatgacca tgtggacagc
421 caggactcca ttgactcgaa cgactctgat gatgtagatg acactgatga ttctcaccag
481 tctgatgagt ctcaccatc tgatgaatct gatgaactgg tcactgattt tcccacggac
541 ctgccagcaa cccaaatgtt cactccagtt gtccccacag tagacacata tgatggccga
601 ggtgatagtg tggttatgg actgaggtca aaatctaaga agtttcgca gacccacatc
661 cagtaccctg atgctacaga cgaggacatc acctcacaca tgaaaagcga ggagttgaat
721 ggtgcataca aggccatccc cggtggccag gacctgaacg cgccttctga ttgggacagc
781 cgtggaaagg acagttatga aacgagtcag ctggatgacc agagtgtga aacccacagc
841 cacaagcagt ccagattata taagcgaaaa gccaatgatg agagcaatga gcattccgat
901 gtgattgata gtcaggaact ttccaaagtc agccgtaat tccacagcca tgaatttcac
961 agccatgaag atatgctgg ttagaaaaaaa aaaaatgg aagaagataaa acacccatggaaa
1021 tttcgatattt ctcatgaatt agatagtgc tcttctgagg tcaattaaaaa ggagaaaaaaa
1081 tacaatttct cactttgcattt ttagtcaaaa gaaaaaatgc tttatagcaa aatggaaagag
1141 aacatgaaat gttttttttt cagtttattt gttgaatgtg tatcttattt agtctggaaa
1201 taactaatgt gtttgataat tagtttagtt tgggtttca tgaaaactcc ctgtaaacta
1261 aaagcttcag gtttatgtct atgttcattt tataaaatggaa atgcaaaacta tcactgtatt
1321 ttaatatttgc ttattcttc atgaaatggaa attttatgttag aagcaaaacaa aataactttt
1381 cccacttaaa aagagaatat aacattttgc gtcactataa tttttgttt tttaatgttag
1441 tgtatattttt gttgtgatta tctttttgtt gttgtgataaa atcttttattt ttgtatgtaa
1501 taagaatttgc gtgggtgttcaaa ttgtttttttt gttttccac gttgtccag caattataaa
1561 aacataaccc tttttactgc ctaaaaaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaa (SEQ

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ID NO:89)

FIGURE 48A

Osteopontin (NM_000582)

MRIAVICFCLLGITCAIPVKQADSGSSEEKQLYNKPDAVATWL
NPDPSQKQNLLAPQTLPSKSNESHDHMDDMDDEDDDHVDSQDSIDSNDSDDVDDTDD
SHQSDESHHSDESDELVTDFPTDLPATEVFTPVVPTVDTYDGRGDSVYGLRSKSKKF
RRPDIQYPDATDEDITSHMESEELNGAYKAI PVAQDLNAPSDWDSRGKD SYETSQLDD
QSAETHSHKQSRLYKRKANDESNEHSDVIDSQELSKVSREFHSHEFHSHEDMLVVDPK
SKEEDKHLKFRISHIELDSASSEVN (SEQ ID NO: 90)

FIGURE 48B

Galectin 8 (NM_006499)

1 tggacttgga tccgaggcgacg acgaggaagc tgagaaaacc ctggcggtga cccccgtggac
61 ctgggcgcgc cgggaaggtc cagcgcttgg tccaggcagg cggggatgtg cggtgaccac
121 cctggtcctg aaaagtccag ccccgaatct ccctccctcc tagacctgga ggcctggaaac
181 agccagccgc ccacggacgc cagagccggg aaccctgacg gcacttagct gctgacaacaaac
241 aacctgtccc gtggacgcct gaaacaccag tctttggggc cagtgccctca gtttcaatcc
301 aggtaacctt taaatgaaac ttgcctaaaa tcttaggtca tacacagaag agactccaat
361 cgacaagaag ctggaaaaga atgatgttgt ccttaaacaac cctacagaat atcatctata
421 acccggtaat cccgtatgtt ggcaccattc ccgatcagct ggatcctgga actttgattg
481 tgatatgtgg gcatgttccct agtgacgcag acagattcca ggtggatctg cagaatggca
541 gcagtgtgaa acctcgagcc gatgtggcct ttcatattcaa tcctcgttc aaaaggggcc
601 gctgcattgt ttgcaatact ttgataaatg aaaaatgggg acgggaagag atcacctatg
661 acacgcctt caaaaagagaa aagtctttg agatcgtgat tatggtcta aaggacaaat
721 tccaggtggc tgtaaatgga aaacataactc tgctctatgg ccacaggatc gggccagaga
781 aaatagacac tctgggcatt tatggcaaag tgaatattca ctcaatttgtt tttagcttca
841 gctcggaacct acaaagtacc caagcatcta gtctggaaact gacagagata agtagagaaa
901 atgttccaaa gtctggcabc ccccgacttc agactgtctc tccctcctgg gatttacagg
961 gtcatggctc tgaaacattc tgttagtgtt tttggacacg agtttccctg gagatcgctt
1021 tctgcagggcc tattggctg actgtggctt ctttcagag cctgccattc gctgcaaggt
1081 tgaacacccc catgggcctt ggacgaactg tcgtcgatc aggagaagtg aatgcaatg
1141 caaaaagctt taatgttgc ctactagcag gaaaatcaaa ggatattgct ctacacttga
1201 acccacgcct gaatattaaa gcatttgaa gaaattctt tcttcaggag tcctggggag
1261 aagaagagag aaatattacc tctttcccat tttagtctgg gatgtacttt gagatgataa
1321 tttactgtga tgtagagaa ttcaagggtt cagtaaatgg cgtacacagc ctggagataca
1381 aacacagatt taaagagctc agcagtattt acacgctgga aattaatgga gacatccact
1441 tactggaaatg aaggagctgg tagcctaccc acacagctgc tacaacaaacc aaaatacaga
1501 atggcttcgt tgataactggc cttgctgaaa cgcacatctac tgcattctt ttgttttat
1561 tgtaaaaatg agctgtgca ccatttagatc ctgctgggtt ttctcagttc ttgcctatgaa
1621 gtatgggtgt gtctagcact gaatggggaa actgggggca gcaacactt tagccagtt
1681 aagccactt gccctctctc ctactttggc tgactcttca agaatgccc tcaacaaatg
1741 tttatggagt acctactata atacagtagc taacatgtat tgagcacaga ttttttttgg
1801 taaaactgtg aggagctagg atatataactt ggtgaaacaa accagtatgt tccctgttct
1861 cttgagcttc gactttctg tgctctattt ctgcgcactt cttttctac aggcattac
1921 tcaactccca aggggtcctc tgggattagt taagcagcta taaaatcacc cgaagacact
1981 aatttacaga agacacaact cttccccag tgatcactgt cataaccagt gctctacccgt
2041 atccccatcac tgaggactga tggactga catcattttc tcgtataaaa catgtggctc
2101 tattagctgc aagcttacc aagtaattgg catgacatot gggcagacaa attaaggca
2161 aaaaccaaaag caaaaacaaat acatgggtct gaaattaact tgatgccaag cccaaaggcg
2221 ctgatttctg tggatggaa cttagggcaa atcagagttt acacagacgc ctacagaaag
2281 tttcagggaaag aggcaagatg cattcaattt gaaagatatt tatggcaac aaagtaaggt
2341 caggattaga cttcaggcat tcataaggca ggcactatca gaaagtgtac gccaactaag
2401 ggaccaccaa agcaggcaga ggtatgcag aatctgttt tggccatg aaatcacca
2461 tcaaggccctc cggttctcta aagattagtc catcatcatt agcaactgag atcaaagcac
2521 tcttccactt tacgtgatta aatcaaacc tggatcagca aaaaaaaaaa aaaaaaaaaa
2581 aaaaaaaaaaaa aaa (SEQ ID NO: 91)

FIGURE 49A

Galectin 8 (NM_006499)

MLSLNNLQNI IYNPVI PYVGTIPDQLDPGTLIVICGHVPSDADR
FQVDLQNQSSVKPRADVAFHFNPRFKRAGCIVCNTLINEKGREEITYDTPFKREKSF
EIVIMVLKDKFQAVNGKHTLLYGHHRIGPEKIDTLGIYGKVNIHSIGFSFSSDLQSTQ
ASSLELTEISRENVPKS GTPQLQTVSPSWDLQGHGSETFC SVLWTRVFL EIAFCRPIG
LTVASFQSLPFAARLNTPMGPGR TVVVKG EVNANAKSFNV DLLAGKS KDI ALH LNPRL
NIKAFVRNSFLQESWGEEERNITSFPFSPGMYFEMI IYCDVREFKVAVNGVHSLEYKH
RFKELSSIDTLEINGDIHLLEVRSW (SEQ ID NO: 92)

FIGURE 49B

PGS1 (bihlycan, NM_001711)

1 agcctccgc cggccgcctc tgtccctc tctccacaaa ctgcccagga gtgagtagct
 61 gcttcggtc cgccggacac accggacaga tagacgtcg gacggccac caccaggcc
 121 cgccaactag tcagecctcg cctggcgcct cccctctcca ggtccatccg ccatgtggcc
 181 cctgtggcgc ctctgttcc tgctggccct gagccaggcc ctgcctttt agcagagagg
 241 cttctggac ttcaccctgg acgatggcc attcatgatg aacgatgagg aagcttcggg
 301 cgctgacacc tcgggcgtcc tggacccgga ctctgtaca cccacctaca ggcgcattgtg
 361 tccttcggc tgccactgcc acctgcgggt ggttcagtgc tccgacactgg gtctgaagtc
 421 tgtgccccaaa gagatctccc ctgacacacc gctgctggac ctgcagaaca acgacatctc
 481 cgagctccgc aaggatgact tcaagggtct ccagcaccc tacgcctcg tcctggtaa
 541 caacaagatc tccaagatcc atgagaaggc ttccagccca ctgcggaaagg tgcagaagct
 601 ctacatctcc aagaaccacc tggtgagat cccgcaccaac ctacccagct ccctggtgga
 661 gctccgcatac cacgacaacc gcacccgcaa ggtgcaccaag ggagtgttca ggcggctccg
 721 gaacatgaac tgcacatcgaga tgggcgggaa cccactggag aacagtggct ttgaacctgg
 781 agccttcgat ggccctgaagc tcaactaccc ggcacatctca gaggccaaagg tgactggcat
 841 ccccaagac ctccctgaga ccctgaatga actccaccta gaccacaaca aaatccaggc
 901 catcgaactg gaggacactgc ttgcctactc caagctgtac aggctggcc taggcaccaa
 961 ccagatcagg atgatcgaga acggggaccc gagcttcctg cccacccctcc gggagctcca
 1021 cttggacaac aacaagtgg ccagggtgcc ctcagggtctc ccagacactca agctcctcca
 1081 ggtggcttat ctgcactcca acaacatcac caaagtgggt gtcaacgact tctgtcccat
 1141 gggcttcggg gtgaagcggg cctactacaa cggcatcagc ctcttcaaca accccgtgcc
 1201 ctactggag gtgcagccgg ccactttccg ctgcgtact gaccgcctgg ccatccagg
 1261 tggcaactac aaaaagtaga ggcagctgca gccaccgcgg ggcctcagtg ggggtctctg
 1321 gggAACACAG ccagacatcc tggggggag gcagagccag gaagctaagg cagggcccaag
 1381 ctgcgtccaa cccagcccc cacccgggt ccctgacccc agctcgatgc cccatcaccg
 1441 cctctccctg gctcccaagg gtgcagggtgg ggcacaggcc cggcccccatt cacatgtcc
 1501 cttggcctca gagctcccc tgctctccca ccacagccac ccagaggcacc cccatgaagc
 1561 tttttctcg ttcactccca aacccaagtg tccaaggctc cagtccttagg agaacagtcc
 1621 ctgggtcagc agccaggagg cgggtccataa gaatggggac agtgggtctc gccagggtctg
 1681 ccgcacactgt ccagacacac atgttctgtt ctccttcctc atgcatttcc agccttcaa
 1741 ccctccccga ctctgcggct cccctcagcc cccttgcac gttcatggctt gtccctccca
 1801 gaccctgtt ccactggccc ttgcaccagt ctccttcctt gttctctt tccccgtctt
 1861 tcctctctt ctctctctt ctctctctt ctttctgtgt gtgtgtgtgt gtgtgtgt
 1921 gtgtgtgtgt gtgtgtgtgt cttgtgttc ctcagacactt ttcgtttctc gagctgggtg
 1981 gcctgttccc tccatctctc cgaacctggc ttgcctgtc ctttcactc cacaccctct
 2041 ggccttcgtc ttggactgg gactgtttc tttctgtgt gtgtgtgtgt gtgtgtgt
 2101 cacaAAACCC cagggacacgc ggtctccccca gcctgcctt ctcaggccctt gcccccaaac
 2161 ctgtactgtc ccggaggagg ttggggagggt gaggcccacg atcccgccca gatgacaccca
 2221 tcaaccgcca gagtcccaga caccgggttt cctagaagcc cctcaccccc actggccac
 2281 tggtggttag gtctccccctt atccctctgg tccagcgcac ggaggggtctt cttctgagg
 2341 cggtggtgt cttccatata aagaaacacc gtgcacactg aaaaaaaaaaaaaaaa
 2401 a (SEQ ID NO:93)

FIGURE 50A

PGS1 (bihlycan, NM_001711)

MWPLWRLVSSLALSQALPFEQRGFWDFTLDDGPFMMNDEEASGA
DTSGVLDPDSVTPTYSAMCPFGCHCHLRVVQCSDLGLKSVPKEISPDTTLDDLQNNDI
SELRKDDFKGLQHLYALVLVNNKISKIHEKAFAFSPLRKLQKLYISKNHLVEIPPNLSS
LVELRIHDNRIRKVPKGVFSGLRNMNCIEMGGNPLENSGFEPGAFDGLKLNLYLRISEA
KLTGIPKDLPETLNELHLDHNKIQAIELEDLLRYSKLYRLGLGHNQIRMIENGSLSFL
PTLRELHLDNNKLARVPSGLPDLKLLQVVYLHSNNITKVGVNDFCPMGFGVKRAYYNG
ISLFNNPVPYWEVQPATFRCVTDRLAIQFGNYKK (SEQ ID NO: 94)

FIGURE 50B

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Frizzled 2 (NM_001466)

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1 cgagtaaaagt ttgcaaagag gcgcgggagg cggcagccgc agcgaggagg cggcggggaa
61 gaagcgcagt ctccgggttg gggggggggg cggggggggc gccaaggagc cgggtggggg
121 gcggcggcca gcatgcggcc cgcagcgcc ctgcccccc tgcgtctgccc gtcgtctgctg
181 ctgcccggcc cggggccggc ccagttccac ggggagaagg gcatctccat cccggaccac
241 ggcttctgcc agcccatctc catccccgt tgacacggaca tcgcctacaa ccagaccatc
301 atgccaacc ttctgggcca cacgaaccag gaggacgcag gcctagaggt gcaccagttc
361 tatccgctgg tgaaggtgca gtgcgtcccc gaactgcgtct tttccctgtg ctccatgtac
421 gcaccctgt gcaccgtgt ggaacaggcc atcccgccgt gccgctctat ctgtgagcgc
481 gcgcggcagg gtcgcaagc cctcatgaac aagttcggtt ttcaagtggcc cgagcgcctg
541 cgctgcgagc acttcccggc ccacggcgc gaggcagatct gcgtcggcca gaaccactcc
601 gaggacggag ctccccggcgt actcaccacc gcgcggccgc cgggactgca gccgggtgcc
661 gggggcaccc cgggtggccc gggggggcgc ggcgtcccc cgcgtacgc cacgctggag
721 cacccttcc actgcccggc cgtctcaag gtgcatttcct attcagatca caagttctg
781 ggcgagcgtg attgtgtcgc gcccgtcga cctgcggcgc ccgatggttc catgttcttc
841 tcacaggagg agacgcgttt cgcgcgcctc tggatccca cctggtcggg gtcgtgtcgc
901 gcttcacact tttcaactgtt caccacgtac ttggtagaca tgacgcgtt ccgcataccca
961 gagcggccta tcattttct gtcgggctgc tacaccatgg tgcgggtggc ctacatcgcg
1021 ggcttcgtgc tccaggagcg cgtgggtgtc aacgagcgct tctccgagga cggttaccgc
1081 acggtgtgtc agggcaccaa gaaggagggc tgcaccatcc tttcatgtat gctctacttc
1141 ttcagcatgg ccagctccat ctgggggtc atccctgtcgc tcacctgggtt cctggcagcc
1201 ggcatgaagt gggggcacga ggcacatcgag gcacactctc agtacttcca cctggccgccc
1261 tggggccgtgc cggccgtcaa gaccatcacc atccctggcca tggggccagat cgacggcgcac
1321 ctgctgagcg gcgtgtgtt cgtggcctc aacagcctgg acccgctgc gggcttcgtg
1381 cttagcgcgc tttcgtgtt cctgttcatc ggcacgtcct tcccttggc cggcttcgtg
1441 tcgctttcc gcatccgcac catcatgaag caccgacggca ccaagaccga aaagctggag
1501 cggctcatgg tgcgcatcg cgtttctcc gtgcgttaca cagtgcggc caccatcgtc
1561 atcgcttgc acttctacga gcaggcctc cgcgagcact gggagcgcctc gtgggtgagc
1621 cagcactgca agagcctggc catcccggtc cccggcgcact acacgcgcgc catgtcgccc
1681 gacttcacgg tctacatgtt caaataccc atgacgcctca tcgtgggcat cacgtcgggc
1741 ttctggatct ggtcgccaa gacgcgtcgc tgcgtggagga agttctacac tgccttcacc
1801 aacagccgac acggtgagac caccgtgtga gggacgcccc caggccggaa cccgcggcgc
1861 ctttcctccg cccgggggtgg ggcccttaca gactccgtat ttataaaaaa taaaataaaaa
1921 acgatcgaaa ccatttcact tttaggttgc ttttaaaaag agaactctct gccaacacc
1981 ccc (SEQ ID NO:95)

```

FIGURE 51A

Frizzled 2 (NM_001466)

MRPRSALPRLLPPLLLPAAGPAQFHGEKGISIPDHGFCQPISI
PLCTDIAYNQTIMPNLLGHTNQEDAGLEVHQFYPLVKVQCSPELRFFLCSMYAPVCTV
LEQAIPPCRSICERARQGCEALMNKFGFQWPERLRCEHFPRHGAEQICVGQNHSEDGA
PALLTTAPPGLQPGAGGTGGPGGGGAPPRYATLEHPFHCPRVLKVPSYLSYKFLGE
RDCAAPCEPARPDGSMFFSQEETRFARLWILTWSVLCCASTFFTVTTLVDMQRFRYP
ERPIIFLSCCYTMVSAYIAGFVLQERVVCNERFSEDEGYRTVVQGTKKEGCTILFML
YFFSMASSIWVWVILSLTWFLAAGMKWGHEAI EANSQYFHAAWAVPAVKTITILAMGQ
IDGDLLSGVCFVGLNSLDPLRGFVLAPLFVYLFIGTSFLLAGFVSLFRI RTIMKHDT
KTEKLERLMVRIGVFSVLYTVPATIVIACYFYEQAFREHWERSWVSHCKSLAI PCPA
HYTPRMSPDFTVYMIKYLMTLIVGITSGFWIWSGKTLHSWRKFYTRLTNSRGETTV (SEQ ID NO: 96)

FIGURE 51B

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ISLR (NM_005545)

1 aagcagttgt tttgctggaa ggagggagtg cgcggtgc cccgggctcc tccctgccgc
 61 ctcctctcag tggatggttc caggcaccc gtctgggca gggagggcac aggcctgcac
 121 atcgaagggtg ggggtggacc aggctgcccc tcgccccagc atccaagtcc tccctggc
 181 gcccgtggcc ctgcagactc tcagggctaa ggtcctctgt tgcttttgg ttccaccta
 241 gaagaggctc cgcttgacta agagtagctt gaaggaggca ccatgcagga gctgcacatcg
 301 ctctggtggg cgcttctcct gggcctggct caggcctgcc ctgagccctg cgactgtggg
 361 gaaaagtatg gttccagat cgccgactgt gcctaccgcg acctagaatc cgtccgcct
 421 ggctccccgg ccaatgtgac tacactgago ctgtcagcca accggctgccc aggctgccc
 481 gagggtgcct tcagggaggt gccctgtc cagtcgtgt ggctggcaca caatgagatc
 541 cgcacgggtgg ccggccggagc cctggctct ctgagccatc tcaagagcct ggacccctc
 601 cacaatctca tctctgactt tgcctggagc gacctgcaca acctcagtgc cctccaaattg
 661 ctcaagatgg acagcaacga gctgacccctc atccccccgc acgcctcccg cagcctccgt
 721 gctctgcgt cgctgcaact caaccacaac cgcttgacca cattggccga gggcacccctc
 781 acccccgtca ccgcgcgtgtc ccacctgcag atcaacgaga accccttgcg ctgcacccctc
 841 ggcatcggtg ggctcaagac atggccctg accacggccg tgccatccc ggagcaggac
 901 aacatcgct gcacccctacc ccacgtgtc aagggtacgc cgctgagccg cctgcccgc
 961 ctgccatgtc cggcccccctc agtgcagtc agtaccaac ccagccagga tggtgccgag
 1021 ctgcggcctg gtttgtgtc ggcactgcac tgtatgtgg acgggcagcc ggcccctc
 1081 cttcaactggc acatccagat acccaactggc attgtggaga tcaccagccc caacgtggc
 1141 actgatgggc gtgcctgtc tggcaccctc gtggccagct ccacggccgc ctccaggcc
 1201 tttgccaatg gcagcctgtc tatccccgac tttggcaagc tggaggaagg cacctacagc
 1261 tgcctggcca ccaatgagct gggcagtcgtc gagagctcag tggacgtggc actggccacg
 1321 cccgggtgagg gtgggtgagga cacactgggg cgcaggtcc atggcaaagg ggttgaggga
 1381 aagggtgtc atacgggtga caacggagtg cagccatcag gcccggagga caatgtggc
 1441 atcatctacc tcagccgtgc tgggaaccct gaggctgcag tcgcagaagg ggtccctggg
 1501 cagctcccc caggcctgtc cctgctggc caaacccctcc tccttttctt cttccctcacc
 1561 tccttctagc cccacccagg gcttccctaa tcctccccc tggccctacc aatgcccctt
 1621 taagtgtgc aggggctcgg ggttggcaac tcctgaggcc tgcattgggtg acttcacatt
 1681 ttcctacctc tccttctaat ctcttctaga gcacccctgc tcccccaactt ctagacccctc
 1741 tccaaacttag tgacttagat agaatttgcat cccctaaactc actgtctgcg gtgcatttg
 1801 ctgctaacag cattgcctgt gctctcttc cagggcagc atgctaacgg ggcgacgtcc
 1861 taatccaact gggagaaggc tcagtgggtgg aattccaggc actgtgactg tcaagctggc
 1921 aaggcccagg attgggggaa tggagctgg gcttagctgg gaggtggctc gaagcagaca
 1981 gggaaatggga gaggaggatg ggaagtagac agtggctggg atggctctga ggctccctgg
 2041 ggcctgctca agctcctcct gctccctgt gttttctgtat gattttgggg cttggggatc
 2101 cctttgtcct catctgagac taaaatgtgg ggatccaggc tggcttcctt cctcttaccc
 2161 ttcctccctc agcctgcaac ctctatcctg gaacctgtcc tcccttctc cccaaactatg
 2221 catctgtgt ctgctccctc gcaaaggcca gccagctgg gaggcagcaga gaaataaaaca
 2281 gcatttctga tgcc (SEQ ID NO:97)

FIGURE 52A

P2000R1

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ISLR (NM_005545)

MQELHLLWWALLGLAQACPEPCDCGEKYGFQIADCAYRDLESV
PPGFPANVTTLSLSANRLPGLPEGAFREVPLLQSLWLAHNEIRTVAA
GALASLSHLKS
LDLSHNLISDFAWSDLHNLSALQLLKMDSNELTFIPRDAFRSLRALRSLQLNHNR
LHT
LAEGTFTPLTALSHLQINENPDFCTCGIVWLKTWALTAVSIPEQDNIACTSPHVLKG
TPLSRLPPLPCSAPSQVQLSYQPSQDGAE^LRPGFVLALHCDVDGQPAPQLHWHIQIPSG
IVEITSNVGTDGRALPGTPVASSQPRFQAFANGSLLIPDFGKLEEGTYSC
LATNELG
SAESSVDVALATPGE^GGEDTLGRRFHGKAVEGKG^CYTVDNEVQPSGPEDNVVIIYLSR
AGNPEAAVAEGVPGQLPPG^LLLGQSLLLFFFLTSF (SEQ ID NO: 98)

FIGURE 52B

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FLJ23399 (NM_022763)

1 tgaccggc cgtgtggcc agcgggaaagg aagccagttg aggaaagtgc tccatgaatg
 61 tacgtcacaa ttagtgcac cgttccaaatc cctctggaaac tgccaccatt gctgaacgg
 121 gaggtggcca ttagtgcac cttggtaat ggagatgcag ctcagcagg tatttcgtt
 181 caagttatac caggtgagac ttgcacaata agagcagagg atgaaacact tcagtgcatt
 241 caaggacctg ctgaagttcc catgtgtca cccatggat ccattcctcc cattcatgtg
 301 cctccaggat atatctcaca ggtgattgaa gatagtactg gagtccggc ggtgggt
 361 acacccagg ttcctgagtg ttatccccca agtacccct cagccatgtc tccaaaccat
 421 catctccctc cctatctgac tcaccatcca cattttattc ataactcaca cacggcttac
 481 taccacaccc ttaccggacc tggagatatg ccgcctcagt ttttccccca gcatcatctt
 541 ccccacacaa tatatggta gcaagaaatt ataccattt atgaaatgtc aagctacatc
 601 acccgagaag accagtacag caagcctcg cacaaaaaac tggaaagaccg ccagatcgat
 661 cgccagaacc gactcaacag acctccctt gctatctaca aaagcagctg cacaacagta
 721 tacaatggct atgggaaaggcc ccatagtggt ggaagtggcg gaggcggcag cggtagtggt
 781 cccggattaa agaaaacaga gcgcacgac agaagcagcc caaagtgcgaa tgattcagac
 841 ttgcaagaat atgagttgga agttaaagagg gtgcaagaca ttcttcggg aatagagaaa
 901 ccacagggtt ctaatattca ggcaagagca gttgttgtt cctgggctcc ccctgttgg
 961 ctttcctgtg gaccccacag tggctttcc ttccctaca gttacgaggt ggccttatca
 1021 gacaaaggac gagatggaaa atacaagata atttacagtg gagaagaatt agaatgtaac
 1081 ctgaaagatc ttagaccac aacagattat catgtgaggg tttatgccat gtacaattcc
 1141 gtaaaggat cctgctccga gcctgttagc ttccaccaccc acagctgtgc acccgagtgt
 1201 cttttccctt ctaagctggc acataggac aaaagttcac taaccctgcgat gttggaggca
 1261 ccaatgaca acggttcaaa aataccacac taccttttag agtggatgaa gggaaaaaaa
 1321 aatagtgggt ttagacagtg ttcttcggg agccagaagg actgcaagtt gacaaagctt
 1381 tgtccggcaa tgggttacac attcaggatg gccgctcgaa acgacattgg taccagtgg
 1441 tatagccaaag aggtgggttg ctacacatta gggaaatatcc ctcagatgccc ttctgcacca
 1501 aggctgggtc gagctggat cacatgggtc acgttgcagt ggagtaagcc agaaggctgt
 1561 tcaccggagg aagtgtacac ctacaccctt gaaattcagg agatgaaaaa tgataacc
 1621 ttccacccaa aatacactgg agaggattt acctgtactg tggaaaatct caaaagaagc
 1681 acacagttata cattcaggat gactgttcc aatacggaa gggaaatctg tccaaagcgaa
 1741 gttctgtttt gtacgacgag tcctgacagg cctggacccctt ctaccagacc gttgtcaaa
 1801 gggccaggta catctcatgg cttagtgc aatgggatc cccctaaggaa caatgggt
 1861 tcagaaatcc tcaagttactt gctagagatt actgatggaa attctgaagc gaatcagtgg
 1921 gaagttggctt acagtgggtc ggctaccgaa tacacccatc cccacttgcgaa accaggcact
 1981 ttgtacaaac tccggcatg ctgcacatcgtt accggccggac acagccagtg ttctgaaagt
 2041 cttccctgttc gcacactaa cattgcacca ggtcaatgtc gaccaccgg ggtttgggt
 2101 agacccaaacg acaaaagaatg ccacttagag tggatgttc ctgcacatcgaa aagtggct
 2161 gaggtctcag agtacagcgt ggagatgcg gggccggac acgttagctc ggaagtgtac
 2221 catggcccg agctggatg caccgtcgcc aacctgttcc ctggacccgt gtatcgctt
 2281 cgggtgggg ctctgaatga tgggggtt ggtccctatt ctgtgtctc agaaattacc
 2341 actgctgcag ggcctccctt gcaatgcaccc gaccccttgcgat ttctgttac acctgtatgg
 2401 tgtgtcttag tgggttgggaa ggtctgtat agttctgttgcgat ctcacatctc agagtacagg
 2461 ttggaaatggg gagaagatga agaatttttgcgaa gaaatcattt atcattggac agacacc
 2521 tttgaaataa gagacctgtt gcctgtgcgaa cgttgcgtt gtagactaca ggccttcaat
 2581 caaggccggg caggcccgta cagtgcaccc gtccttgcgaa agacggccagg gtctggcc
 2641 gaccccgctt ccactctgt tgccttggag gggggccccc ttgtgcctt ccctgattca
 2701 cttccctgttc gccttgcgtt gaaatggaa gagccgtgcgaa ataaacggatc tggaaatcc
 2761 gcttacacca ttgtatctagg agacactagc attaccgtgg gcaacaccac catgcacat
 2821 atgaaagatc tccttccaga aaccacccatc cggatcggaa ttccaggatc aatgaaatt
 2881 ggagctggac catttagtca gttcatttttgcgaa gggggccccc ttgtgcctt ccctgattca
 2941 cctaggcttag aatgtgtgc tgctggctt cagagctgcgaa agttaaatttggg gggagac
 3001 aactccaaga cacaatgtgc tgaggacatt gtgtacacac tacagctggaa ggacagaaac
 3061 aagaggtttta ttcaatctt cagaggaccc agccacaccc acaagggtccca gagactgac
 3121 gaattcacaat gtcactccctt cagaatcccg gcagcaagcg aggctggaga agggccctt
 3181 tcagaaacctt atacccttgcgaa cacaacccaa agtgccttccca ccaccatcaa agcac
 3241 gtaacacatcgtt tagaaggaaa ttcatgtgaa atttatggg agacggatc accatgaaa
 3301 ggtgaccctg ttaactacat tctgcagttt gggatgttggaa gagaatctgaa gtacaaacac

FIGURE 53A

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3361 gtgtacaagg gagaagaagc cacattccaa atctcaggcc tccagaccaa cacagactac
 3421 aggttccgcg tatgtgcgtg tcgtcgctgt ttagacacct ctcaggagct aagcggagcc
 3481 ttcagccccct ctgcggctt tgtattacaa cgaagtgagg tcatgcctac aggggacatg
 3541 gggagcttag atgatcccaa aatgaagagc atgatgccta ctgatgaaca gtttcagcc
 3601 atcattgtgc ttggcttgc aactttgtcc attttatgg cctttatatt acagtaatcc
 3661 ttaatgaagt aaacccaaca aaactagagg tatgaattaa tgctacacat ttaatacac
 3721 acatttattc agatactccc cttttaaag ccctttgtt ttttgattta tataactctgt
 3781 ttacagatt tagctagaaa aaaaatgtca gtgtttgtt gcacctttt gaaatgcaaa
 3841 actagaaaaa gtttaaactg gatTTTTTT tttaaaaaaa agaaaaaaaaa agaagaaaaag
 3901 tataccagat accaaaagct agctttctta tgTTTCCCT taaatttca gatttacctt
 3961 cattctgtt tcactgatgt ctTTTCAAG cctttgattt tttttttttt gttacagtt
 4021 agtaatttat attcaccagt cacttcata gtcttgaaca tctgtatctg taaacatgaa
 4081 tcaccgtgtg tgtacttaca gggctaggat ttcaGTTG tcagagtatt accacacagc
 4141 aacagcaaca tacagaagat atgTTcactc agataagact gccctaaaca accatTTGT
 4201 cactcagttt ttaactgtg tttagctcat ttaaatcaaa atgtgtactt taatctaaaa
 4261 tgTTTAAATA atctgtattt cttataattt taacactatg agtgcctgt ataagaaatc
 4321 aagtaaccag aatgcaccta taaaattatgg agcattgttag attttaccac atcaattcat
 4381 agcagtaact ttaagagggc attgtcaat agttAGTTG tttcttGTT agctatttt
 4441 aaggctgctt taacttgg tttttttt gtatataact acttctaattc taatcactag
 4501 agttattata ttctgtttag tttgaccaga atttatgac aagaactggt gacagtttag
 4561 tgcctctgcc cattgtccat gattacact aattgtgagc agtcttctta tggcagct
 4621 cattattttt gaaacatttg ccttaggt gttttttttt gatatcaatg aagtatttt
 4681 tttcaataacc ttaattcagt gcacataata ctaatgtaac agcagatgaa aattgataaa
 4741 acccaaaaaga gagtcatcta aatttgtatg tccattttctt gggggtttgc ctggccatgg
 4801 ttggagaggg aatgggtttt gatggtaaac acagggtgtt tgggatcaa ggagctaga
 4861 ttctccctt gatctgtca ctaacttgcg gcgtgaccc aacacgtcac ttacccctc
 4921 tggcctcag tttcccatg catggggggg aaaataaaaat aaaacggggg ttctaatgtt
 4981 tggcctcag tttcccatg catggggggg aaaataaaaat aaaacggggg ttctaatgtt
 5041 cgttattttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5101 tgaagtccat aatgttcgag tacccatggg acatTTAAG gttggaggtt caaatatatt
 5161 cccaaaagggtt gcaacagaca cagtgtatcc ccctgcttctt gttttttttt tttttttttt
 5221 cttggggggg cttgtatcata gctttttttt gttttttttt tttttttttt tttttttttt
 5281 cctgtactat tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5341 tttggggggg tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5401 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5461 atatTTTGT tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5521 tagtattttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5581 attaaatGCC aaaaaaaaaa tacattatca gttttttttt tttttttttt tttttttttt
 5641 ccataatcat ctcttggaaag aaaaatgtgtca gatcaatgaa ttatTTGTG tgcctatatt
 5701 gacgtatgtca gttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5761 agctttgcaactgtatggca tcaaggtaaa tttttttttt tttttttttt tttttttttt
 5821 aactcaccccc cttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5881 cttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 5941 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6001 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6061 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6121 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6181 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6241 atcacaataata tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6301 caataaaataata aatTTTGTCA tttttttttt tttttttttt tttttttttt tttttttttt
 6361 atgatgtggcc ttctgtatgtctt ctgtatgtctt tttttttttt tttttttttt tttttttttt
 6421 aaattccagt catgtgaagc aaactggccct tttttttttt tttttttttt tttttttttt
 6481 actttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6541 cttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6601 tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6661 atgttttacc tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6721 atcatgtttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6781 atatcaattt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt
 6841 ctgtatgtca tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt

NO:99)

FIGURE 53B

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FLJ23399 (NM_022763)

MYVTMMMTDQI PLELPPLLNGEVAMMPHLVNGDAQQVILVQVN
PGETFTIRAEDEGTLQCIQGPAEVPMMSPNGSIPPIHVPPGYISQVIEDSTGVRRVVVT
PQSPECYPPSYPSAMSPTHHLPPYLTHPHFIHNSHTAYYPPVTGPGDMPPQFFPQHH
LPHTIYGEQEIIIPFYGMSSYITREDQYSKPPHKKLKDRQIDRQNRLNRPSSAIYKSSC
TTVYNGYGKGHSGGGGGSGSGPGIKKTERRARSSPKSNSDLQEYELEVKRVQDIL
SGIEKPQVSNIQARAVVLSAPPGLSCGPHSGLSPYSEVALSDKGRDGKYKIIYS
GEELECNLKDLRPATDYHVRVYAMYNSVKGCSEPVSFTHSCAPECPFPPLAHRSK
SSLTLQWKAPIDNGSKITNYLLEWDEGKRNSGFRQCFFGSQKHCKLTKLCPAMGYTFR
LAARNDIGTSGSQEVVCYTLGNIPQMPSAPRLVRAGITWVTLQWSKPEGCSPEEVIT
YTLEIQEDENDNLFHPKYTGDLTCTVKNLKRSTQYTFRLTASNTEGKSCPSEVLVCT
TSPDRPGPPTRPLVKGPVTSHGFSVKWDPPKDNGSEILKYLLEITDGNSEANQWEVA
YSGSATEYTFTHLKPGTLYKLRACCISTGGHSQCSES LPVRTLSIAPGQCRPPRVLGR
PKHKEVHLEWDVPASESGCEVSEYSVEMTEPEDVASEVYHGPELECTVGNLLPGTVYR
FRVRALNDGGYGPYSDVSEITTAAGPPGQCKAPCISCTPDGCVLVGWESPDSGADIS
EYRLEWGDEDEESLELIYHGTDTREIRDLLPAAQYCCRLQAFNQAGAGPYSELVLCQT
PASAPDPVSTLCVLEEPLDAYPDSPSACLVLNWEETPCNNNGSEILAYTIDLGDTSETV
GNTTMHVMKDLLPETTYRIRIQAINEIGAGPFSQFIKAKTRPLPPLPRLECAAAGPQ
SLKLKWGDSNSKTHAAEDIVYTLQLEDRNKRFISIYRGPSHTYKVQLTEFTCYSFRI
QAASEAGEGPFSETYTFSTTKSVPPTIKAPRVTQLEGNSCEILWETVPSMKGDPVNYI
LQVLVGRESEYKQVYKGEETFQISGLQTNTDYRFRVCACRRCLDTSQELSGAFSPSA
AFVLQRSEVMLTGDMGLDDPKMKSMMPTEQFAAIIVLGFATLSILFAFILQYFLMK (SEQ ID NO:100)

FIGURE 53C

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TEM1 (NM_020404)

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1 tcgcgatgct gctgcgcctg ttgctggcct gggcgccgc agggcccaca ctgggccagg
61 acccctggc tgctgagccc cgtgcgcct gcggcccccag cagctgtac gctctttcc
121 cacggcgccg cactttcctg gaggcctggc gggcctgccc cgagctgggg ggcgacctgg
181 ccactcctcg gacccccgag gaggcccagc gtgtggacag cctggtggtt gcggggcccg
241 ccagccggct gctgtggatc gggctgcagc ggcaggcccg gcaatgccag ctgcagcgcc
301 cactgcgcgg cttcacgtgg accacagggg accaggacac ggcttcacc aactggggcc
361 agccagcetc tggaggcccc tggccggccc agcgtgtgt gggcctggag gcaagtggcg
421 agcaccgctg gctggagggc tcgtgcacgc tggctgtcga cgctacacgt tgccagttt
481 gcttcgaggg cgcctgccc ggcgtgcagc atgaggcgcc ccaggccggc ccagccgtgt
541 ataccacgcc cttccacccgt gtctccacag agttttagt gctgccttc ggctctgtgg
601 ccgctgtgca gtgcccaggct ggcaggggag cctctctgtc ctgcgtgaag cagcctgagg
661 gaggtgtggg ctggtcacgg gctggggccc tggcctggg gactggctgc agccctgaca
721 acgggggctg cgaacacgaa tgtgtggagg aggtggatgg tcacgtgtcc tgccgctgca
781 ctgagggctt cccgctggca gcagacgggc gcagttgcga ggaccctgt gcccaggctc
841 cgtgcgagca gcagtgtgag cccgggtggc cacaaggcta cagctgccac tgccgctgg
901 gtttccggcc agcggaggat gatccgcacc gctgtgtgga cacagatgag tgccagattt
961 ccggtgtgtg ccagcagatg tggtaact acgttgggtt ctgcgtgtgt tatttagcg
1021 agggacatga gctggaggct gatggcatca gctgcagccc tgcaggggcc atgggtgccc
1081 aggctccca ggacctcgga gatgagttgc tggatgacgg ggaggatgag gaagatgaag
1141 acgaggcctg gaaggccttc aacggtggtt ggacggagat gcctgggatc ctgtggatgg
1201 agcctacgca gcoogctgac tttggccctgg cctatagacc gagcttccca gaggacagag
1261 agccacagat accctacccg gagcccaccc ggccacccccc gtcagtgc cccagggtcc
1321 cctaccactc ctcagtgtc tccgtcaccc ggctgtggt ggtctctgc acgcatccca
1381 cactgccttc tggccaccagg cctctgtga tccctgccac acacccagct ttgtccctgt
1441 accaccagat ccccggtgatc gcagccaact atccagatct gcctctgc taccaacccg
1501 gtattctctc tggtaacttcat tcagcacagc ctccctggca ccagccccct atgatctcaa
1561 ccaaatatcc ggagctcttc cctgcccacc agtccccat gttccagac acccgggtcg
1621 ctggcaccctt gaccaccact cattgcctg gaatcccacc taaccatgc cctctggtca
1681 ccaccctcg tggccagcta cccctcaag ccccgatgc cttgtcctc agaaccagg
1741 ccaccctcg tcccttccat ccaactgccc agccctctt gaccaccacc tccaggtccc
1801 ctgtgtctcc tggccatcaa atctctgtgc ctgctgccac ccagcccgca gccctccca
1861 ccctctgtcc ctctcagagc cccactaacc agacccacc catcagccct acacatcccc
1921 attccaaagc cccccaatc ccaaggaaatg atggcccccag tcccaagttt gccctgtggc
1981 tggccctacc agctcccaca gcagccca cagccctggg ggaggctggg cttgcgcagc
2041 acagccagag ggatgaccgg tggctgtgg tggacttctt ggtgccaacg tggctctttt
2101 tggtggtctt gcttgcactg ggcatacgatg actgcacccg ctgtggccccc catgcaccca
2161 acaagcgcat cactgactgc tatcgctggg tcatccatgc tgggagcaag agcccaacag
2221 aaccctatgcc ccccgaggggc agcctcacag gggtgcagac ctgcagaacc agcgtgtgt
2281 ggggtgcaga ccccccattt gggatgggg ggcgtggaca catggccggg gtcgcaccag
2341 ggaccctatgg gggctgccc gctggacaga tggcttctt gtcctccatg ccagccagg
2401 tcctctctca accactagac ttggctctca ggaactctgc ttccctggccc agcgctcg
2461 accaaggata caccaaaagcc cttaaagaccc cagggggcgg gtgctgggggt cttctccaaat
2521 aaatgggtt tcaaccctaa aaaaaaaaaaaa aaaaaaaa (SEQ ID NO:101)

```

FIGURE 54A

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TEM1 (NM_020404)

MLLRLLLAWAAAGPTLGQDPWAAEPRAACGPSSCYALFPRRTF
LEAWRACRELGGDLATPRTPEEAQRVDSLGVAGPASRLLWIGLQRQARQCQLQRPLRG
FTWTTGDQDTAFTNWAQPASGGPCPAQRCVALEASGEHRWLEGSCTLAVDGYLCQFGF
EGACPALQDEAGQAGPAVYTPFHVLSTEFEWLPFGSVAAVQCQAGRGA\$LLCVKQPE
GGVGWSRAGPLCLGTGCPDNGCEHECVEEVGDGHVSCRCTEGFRLAADGRSCEDPCA
QAPCEQQCEPGGPQGY\$CHCRLGFRPAEDDPHRCVDTDECQIAGVCQQMCVN\$VGGFE
CYCSEGHELEADGISCS\$PAGAMGAQASQDLGDELLDDGEDEEDEDEAWKAFNGGWTEM
PGILWMEPTQPPDFALAYRPSFPEDREPQIPIYPEPTWPPPLSAPRVPYHSSVLSVTRP
VVVSATHPTLPSAHQPPVI\$PATHPALS\$RDHQIPVIAANYPDLP\$AYQPGILSVSHSAQ
PPAHQPPMISTKYPELFPAHQSPMF\$PDTRVAGTQTTTHLPGI\$PPNHAPLVTLGAQLP
PQAPDALVLRTQATQLPIIPTAQPSLTTSRSPVSPAHQISVPAATQPAALPTLLPSQ
SPTNQTSPISPTHPHSKAPQIPREDGPSPKLALWLPS\$APTAAPTALGEAGLAEH\$QR
DDRWLLVALLVPTCVFLVLLALGIVYCTR\$CGPHAPNKRI\$DCYRWVIHAGSKSPTEP
MPPRGSLTGVQTCRT\$V (SEQ ID NO:102)

FIGURE 54B

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Tie2 ligand2 (NM_001147)

```

1 tgggttggtg tttatctcct cccagccttg agggaggaa caacactgta ggatctgggg
61 agagaggaac aaaggaccgt gaaagctgct ctgtaaaagc tgacacagcc ctcccaagtg
121 agcaggactg ttcttcccac tgcaatctga cagtttactg catgcctgga gagaacacag
181 cagtaaaaac caggtttgct actggaaaaa gaggaaagag aagactttca ttgacggacc
241 cagccatggc agcgtagcag ccctgcgtt cagacggcag cagctcggga ctctggacgt
301 gtgttgcggc tcaagtttc taagctgctg gtttattact gaagaaagaa tgtggcagat
361 tggttcttt actctgagct gtgatcttgc cttggccgca gcctataaca actttcgaa
421 gagcatggac agcataggaa agaagcaata tcaggtccag catgggtcct gcagctacac
481 ttccctcctg ccagagatgg acaactgccg ctcttcctcc agccccctacg tgtccaatgc
541 tgtgcagagg gacgcgcgc tcgaataacga tgactcggtg cagaggctgc aagtgcgtgga
601 gaacatcatg gaaaacaaca ctcagtggct aatgaagctt gagaattata tccaggacaa
661 catgaagaaa gaaatggtag agatacagca gaatgcagta cagaaccaga cggctgtgat
721 gatagaataa gggacaaaacc tggtaaccca aacagctgag caaacgcggg agttaactgta
781 tggaaagcc caagtattaa atcagaccac gagacttcaa cttcagctct tggAACACTC
841 cctctcgaca aacaaattgg aaaaacagat tttggaccag accagtgaaa taaacaaatt
901 gcaagataag aacagttcc tagaaaaaaa ggtgctagct atggaaagaca agcacatcat
961 ccaactacag tcaataaaaag aagagaaaaga tcagctacag gtgttagtat ccaagcaaaa
1021 ttccatcatt gaagaacttag aaaaaaaaaat agtgactgcc acggtaata attcagttct
1081 tcaaaaagcag caacatgatc tcatggagac agttaataac ttactgacta tgatgtccac
1141 atcaaactca gctaaggacc ccactgttgc taaagaagaa caaatcagct tcagagactg
1201 tgctgaagta ttcaaatacg gacacaccac aaatggcatc tacacgttac cattccctaa
1261 ttctacagaa gagatcaagg cctactgtga catggaaagct ggaggaggcg ggtggacaat
1321 tattcagcga cgtgaggatg gcagcgttgc ttttcagagg acttggaaag aatataaaagt
1381 gggatttggt aacccttcag gagaatattg gctggaaaat gagtttgtt cgcaactgac
1441 taatcagcaa cgctatgtgc taaaataca ctttaaagac tggaaaggaa atgaggctta
1501 ctcattgtat gaacatttc atctctcaag tgaagaactc aattatagga ttcacccctaa
1561 aggacttaca gggacagccg gcaaaataag cagcatcagc caaccaggaa atgattttag
1621 cacaaggat ggagacaacg acaaattgtat ttgcaaattgt tcacaaatgc taacaggagg
1681 ctgggtgtt gatgcattgtg gtccttccaa cttgaacggg atgtactatc cacagaggca
1741 gaacacaaat aagttcaacg gcattaaatg gtactactgg aaaggctcag gctattcgct
1801 caaggccaca accatgatga tccgaccagg agatttctaa acatcccagt ccacccctgg
1861 aactgtctcg aactatttc aaagacttaa gcccagtgc ctgaaaatgc cggctgcgca
1921 ctgtgtcctc ttccaccaca gagggcgtgt gctcggtgct gacgggacc acatgctcca
1981 gattagagcc tggaaacttt atcacttaaa cttgcattcac ttaacggacc aaagcaagac
2041 cctaaacatc cataattgtg attagacaga acacctatgc aaagatgaac cggaggctga
2101 gaatcagact gacagttac agacgctgct gtcacaacca agaatgttat gtgcaagtt
2161 atcagtaaat aactggaaaa cagaacactt atgttataca atacagatca tcttggaaact
2221 gcattttctc gaggactgtt tataactgt gtaaataccc atatgtcct (SEQ ID
NO:103)

```

FIGURE 55A

Tie2 ligand2 (NM_001147)

MWQIVFFTLSCDLVLAAYNNFRKSMDSIGKKQYQVQHGSCSYT
FLLPEMDNCRSSSPYVSNAVQRDAPLEYDDSVQRLQVLENIMENNTQWLMKLENYIQ
DNMKKEMVEIQQNAVQNQTAVMIEIGTNLLNQTAEQTRKLTDVEAQVLNQTTRELQL
LEHSLSTNKLEKQILDQTSEINKLQDKNSFLEKKVLAMEDKHIQLQSIKEKDQLQV
LVSKQNSIIEELEKKIVTATVNNSVLQKQQHDLMETVNNLLTMMSTSNSAKDPTVAKE
EQISFRDCAEVFKSGHTTNGIYTTLFPNSTEEIKAYCDMEAGGGGTIIQRREDGSVD
FQRTWKEYKVGFGNPSGEYWLGNEFVSQLTNQQRYVLKIHLKDWEGLNEAYSLYEHFYL
SSEELNYRIHLKGLTGAGKISSISQPGNDFSTKDGNDKCIICKCSQMLTGGWWFDAC
GPSNLNGMYPQRQNTNKFNGIKWYYWKGSGYSLKATTMMIRPADF (SEQ ID NO:104)

FIGURE 55B

95/115
VEGFC (NM_005429)

```

1 cggggaaagg gaggaggagg gggacgagg gctctggcgg gtttgaggg gctgaacatc
61 gcgggggtt ctgggtgtcc ccccccgc tctccaaaaa gctacaccga cgccgaccgc
121 ggcggcgcc tccctcgccc tcgcttcacc tcgcgggctc cgaatgcggg gagctcgat
181 gtcccggttc ctgtgaggct tttacctgac acccgcggcc ttccccggc actggctggg
241 agggcgcctt gcaaagtgg gaacgcggag ccccgaccc gctcccgc cctccggctc
301 gcccaggggg ggtcgccggg aggagccgg gggagaggga ccaggagggg cccgcggcct
361 cgcaggggcg cccgcgc caccctgc cccgcacg gaccggtccc ccaccccccgg
421 tccttccacc atgcacttgc tgggcttctt ctctgtggcg tttctctgc tcgcccgtgc
481 gctgctcccg gtcctcgcg aggccgc cgcgcgc gcttcgagt cggactcga
541 cctctcgac gcggagcccg acgcgggcga ggcacaggct tatgcaagca aagatctgga
601 ggagcagttt cggctgtgt ccagttaga tgaactcatg actgtactt acccagaata
661 ttggaaaatg tacaagtgtc agctaaggaa aggaggctgg caacataaca gagaacaggc
721 caacccaac tcaaggacag aagagactat aaaatttgc gcaacatatt ataatacaga
781 gatctgaaa agtattgata atgagtggag aaagactcaa tgcattgcac gggaggtgt
841 tatagatgtg gggaggagt ttggagtcgc gacaaacacc ttcttaaac ctccatgtgt
901 gtccgtctac agatgtgggg gttgctgca tagtggggg ctgcagtgc tgaacaccag
961 cacgagctac ctcagcaaga cgttatttga aattacagtgc cctctctc aaggccccaa
1021 accagtaaca atcagtttgc ccaatcacat ttctgcga tgcattgtcta aactggatgt
1081 ttacagacaa gttcatttca ttattagacg ttccctgcca gcaacactac cacagtgtca
1141 ggcagcgaac aagacctgcc ccaccaatta catgtggaaat aatcacatct gcagatgcct
1201 ggctcaggaa gatttatgt ttctctcgaa tgctggagat gactcaacag atggatttca
1261 tgacatctgt ggaccaaaa aggagctgg tgaagagacc tgcaatgtgtg tctgcagagc
1321 ggggcttcgg ctcgcacgt gtggacccca caaagaacta gacagaaact catgcacgtg
1381 tgtctgtaaa aacaaactct tccctcgc atgtggggcc aaccgagaat ttgatggaaa
1441 cacatgccag tggatgtatgtt aaagaacctg ccccaaaaat caacccctaa atcctggaaa
1501 atgtgcctgt gaatgtacag aaagtcacaa gaaatgttg taaaaggaa agaagttcca
1561 ccaccaaaa tgcacgtt acagacggcc atgtacaaac cggcagaagg cttgtgagcc
1621 aggatttca tatagtgaag aagtgtgtcg ttgtgtccct tcatattggaa aagaccaca
1681 aatgagctaa gattgtactt tttccagtt catcgatattt ctattatggaa aaactgtgtt
1741 gccacagtag aactgtctgtt gaacagagag acccttgcgtt gtcacatgtcta acaaagacaa
1801 aagtctgtct tccctgaacc atgtggataa ctttacagaa atggactgg gctcatctgc
1861 aaaaggcctc ttgtaaagac tgggtttctg ccaatgacca aacagccaaat attttctct
1921 tgtgatttttca taaaagaat gactatataa ttatatttca ctaaaaatattt tggttctgc
1981 ttcattttta tagcaacaac aatttgtaaa actcaactgtg atcaatattt ttatatcatg
2041 caaaatatgt taaaataaa atgaaaattt tattat (SEQ ID NO:105)

```

FIGURE 56A

VEGFC (NM_005429)

MHLLGFFSVACSLLAALLPGPREAPAAAAAFESGLDLSDAEPD
AGEATAYASKDLEEQLRSVSSVDELMTVLYPEYWEMYKCQLRKGGWQHNREQANLNSR
TEETIKFAAAHYNTEILKSIDNEWRKTQCMPREVCIDVGKEFGVATNTFFKPPCVSY
RCGGCCNSEGLQCMNTSTSylSKTLFEITVPLSQGPKPVTISFANHTSRCMSKLDVY
RQVHSIIRRSLPATLPQCQAANKCPTNYMWNNHICRCLAQEDFMSSDAGDDSTDGF
HDICGPNKELDEETCQCVCRAGLRPASCGPHKELDRNSQCVCNKLFPSQCGANREF
DENTCQCVCKRTCPRNQPLNPGKCACECTESPQKCLLKGGKFHHQTCSCYRRPCTNRQ
KACEPGFSYSEEVCRCVPSYWKRQPMS (SEQ ID NO:106)

FIGURE 56B

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tPA (NM_000930)

```

1 atggccctgt ccactgagca tcctcccgcc acacagaaaac ccgcccagcc ggggccaccg
61 acccccacccc ctgcctggaa acttaaggag gccggagctg tggggagctc agagctgaga
121 tcctacagga gtccagggtt ggagagaaaa cctctgcagag gaaaggaaag gagcaagccg
181 tgaatttaag ggacgctgtg aagcaatcat ggatgcaatg aagagagggc tctgctgtgt
241 gctgctgctg tgtggagcag tcttcgttc gcccagccag gaaatccatg cccgattcag
301 aagaggagcc agatcttacc aagtatatctg cagagatgaa aaaacgcaga tgatatacca
361 gcaacatcag tcatggctgc gccctgtct cagaagacaac cggttggaaat attgtggtg
421 caacagtggc agggcacagt gccactcagt gcctgtcaaa agttgcagcg agccaagggt
481 tttcaacggg ggcacctgcc agcaggccct gtacttctca gatttctgtt gccagtgccc
541 cgaaggattt gctggaaat gctgtgaaat agataccagg gccacgtgtc acgaggacca
601 gggcatcagc tacaggggca cgtggagcac agcggagagt ggcgcgcgagtc gcaccaactg
661 gaacagcagc gcgttggccc agaagcccta cagcggccgg aggccagacg ccatcaggct
721 gggctgggg aaccacaact actgcagaaa cccagatcga gactcaaagc cctgggtgcta
781 cgtcttaag gccccggaaat acagctcaga gttctgcagc acccctgcct gctctgaggg
841 aaacagtgac tgctactttg ggaatgggtc agcctaccgt ggcacgcaca gcctcaccga
901 gtcgggtgcc tcctgcctcc cgtggaaattc catgatctg ataggcaagg tttacacagc
961 acacaacccc agtgcccagg cactggccct gggcaaaacat aattactgccc ggaatccctga
1021 tggggatgcc aagccctgtt gccaegtgtc gaagaaccgc aggtgtacgt gggagactg
1081 tgatgtgccc tcctgcctca cctgcggcct gagacagttc acccagcctc agtttcgcata
1141 caaaggaggg ctcttcgcgg acatcgcctc ccaccctgg caggctgcctc tctttccaa
1201 gcacaggagg tgcggccggag agcgggttccct gtgcggggc atactcatca gtcctgctg
1261 gattctctc gcccggccact gcttccagga gaggttcccg ccccaccacc tgacgggtat
1321 ctggccaga acataccggg tggccctgg cgaggaggag cagaatttgc aagtgcaaaa
1381 atacattgtc cataaggaat tgcgtatgtc cacttagac aatgcacattt cgctgctgca
1441 gctgaaatcg gattcgtccc gctgtgcctt ggagagcagc gtggccgcgt ctgtgtgcct
1501 tccccccggcg gacctgcagc tgccggactg gacggagtgt gagcttcccg gtcacggcaa
1561 gcatgaggcc ttgtctccct tctattcggc gcggctgaag gaggttccatg tcagactgt
1621 cccatccagc cgctgcacat cacaacattt acttaacaga acagtccaccg acaacatgt
1681 gtgtgtggc gacactcggc gcggccggcc ccaggcaaac ttgcacgcacg cctggccagg
1741 cgattccggc ggcggccctgg tgcgtctgaa cgatggccgc atgactttgg tggccatcat
1801 cagctggggc ctgggctgtc gacagaaggaa tgcgttccgggt gtgtacacca aggttaccaa
1861 ctacccatgc tggattcgtc acaacatgcg accgttgcacca ggaacaccccg actccctcaaa
1921 agcaaaatggc atcccgccct ttcttctca gaagacactg caaaaggccgcgt gtgttctct
1981 acagacttcc ccaagacccac cacacccgcg aagccggacg agaccctaca ggagaggaa
2041 gagtgcatcc tcccagatcc ttcccatcc ggaagtttc agacttgggt ctgatttcag
2101 gatactctgt cagatggggaa gacatgtatc cacactagcc tctccaggaa tgcctctcc
2161 ctggggcagaa agtggccatc ccaccctgtt ttccatgtttt gccaacccctc ctgacccgtc
2221 accgtgagca gctttggaaa caggaccaca aaaatggaaat catgtctcaa tagaaaaaga
2281 taacaagatc ttccaggaaa gacggattgc attagaaata gacgttatat ttatagtcac
2341 aagagcccg caggccctca aagttggggc aggctggctg gcccgtcatg ttccctcaaaa
2401 gcacccttgc cgtcaagtct cctccctt tccccactcc ctggctctca gaaggttattc
2461 cttttgttgc cagtgtgttggaa agtgttggaaatc ctttttttt ataaaacttta gagtagcatg
2521 agagaattgt atcatttttgc caacttaggct tcagcatatt tatagcaatc catgttagtt
2581 ttacttttgc ttggccacaa ccctgtttt tactgtactt aataaattca gatataatttt
2641 tcacagttt tcc (SEQ ID NO:107)

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FIGURE 57A

tPA (NM_000930)

MDAMKRLCCVLLCGAVFVSPSQEIHARFRRGARSYQVICRDE
KTQMIYQQHQSWLRPVLRSNRVEYCWCNSGRAQCHSVPVKCSEPRCFNGGTQQALY
FSDFVCQCPEGFAGKCCEIDTRATCYEDQGISYRGTWSTAESGAECTNWNSALAQKP
YSGRRPDAIRLGLGNHNYCRNPDQRSKPWCYVFKAGKYSSEFCSTPACSEGNSDCYFG
NGSAYRGTHSLTESGASCLPWNSMILIGKVYTAQNPSAQALGLGKHNYCRNPDGDAKP
WCHVLKNRRLTWEYCDVPSCSTCGLRQYSQPQFRIKGGLFADIASHPWQAAIFAKHRR
SPGERFLCGGILISSCWILSAAHCFQERFPPHHTVILGRTYRVVPGEEQKFEVEKY
IVHKEFDDDTYDNDIAALLQLKSDSSRCAQESSVVRTVCLPPADLQLPDWTECELSGYG
KHEALSPFYSERLKEAHVRLYPSSRCTSQHLLNRTVTDNMLCAGDTRSGGPQANLHDA
CQGDSGGPLVCLNDGRMTLVGIISWGLGCGQKDVPGVYTKVTNYLDWIRDNMRP (SEQ ID NO:108)

FIGURE 57B

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Thrombomodulin (NM_000361)

1 cttgcaatcc aggcttcct tggaagtggc tgtaacatgt ataaaaagaa agaaaggagg
 61 accaagagat gaaagagggc tgcacgcgtg ggggcccag tggtggcgag ggacagtcgt
 121 cttgtacag ggggtgctggc ctcccctggc gcctgccccct gtcggccccg cccgagaacc
 181 tccctgcgcc agggcagggt ttactcatcc cggcgagggt atcccatgcg cgagggcggg
 241 cgcaaggcg ggcagagaac ccagcaatcc gagtatgcgg catcagccct tcccaccagg
 301 cacttccttc ctttcccgaa acgtccaggg agggaggggc gggcacttat aaactcgagc
 361 cctggccgat ccgcattgtca gaggctgcct cgcaggggct ggcgcacgg caagaagtgt
 421 ctgggctggg acggacagga gaggctgtcg ccattcggcgt cctgtgcccc tctgtccgg
 481 cacggccctg tcgcagtgcc cgcgtttcc cgggcgcctg cacgcggcgc gcctggtaa
 541 catgcttggg gtcctggtcc ttggcgcgtt ggcctggcc ggctggggg tccccgcacc
 601 cgcagagccg cagccgggtg gcagccagtgcgtc gactgttcg cgctatcccc
 661 gggcccccgcg accttcctca atgcccgtca gatctgcgac ggactgcggg gccacctaatt
 721 gacagtgcgc tcctcggtgg ctggcgatgtt catttccttg ctactgaacg ggcacggcgg
 781 cggtggccgc cggcgccctt ggatcggcctt gcaagtcgcac cccggctgcg ggcaccccaa
 841 ggcctcggg ccctcgccg gcttccagtg gtttacggg gacaacaaca ccagctata
 901 caggtggca cggctcgacc tcaatggggc tccccttgc ggccctgtgt gcgtcgctgt
 961 ctccgcgtctt gaggccactt tgeccagcga gccgatctgg gaggagcagg agtgcgaagt
 1021 gaaggccgat ggcttccttc gcgagttcca ctcccagcc acctgcaggc cactggctgt
 1081 ggagcccgcc ggcggggctt cgcgcgttcc gatcacctac ggaccccgat tgcggcccc
 1141 cggagccggac ttccaggcgc tgcgggtggg cagtcgcgc ggggtggctt ccctcgctt
 1201 acagctaattt tgcaccgcgc cgcggggcgc ggtccagggg cactggggca gggaggcgg
 1261 gggcgcttgg gactgcaggc tggagaacggc cggctgcgag cacgcgtgcg atgcgatcccc
 1321 tggggctccc cgctgccttgc gcccagccgg cgcgccttgc caggcagacgg ggcgccttgc
 1381 caccgcatttc ggcacgcgtt cctgcacgc cctctgcgag cacttcgtcg ttccaaaccc
 1441 cgaccagccg ggctctact cgtcatgtt cggacccggc taccggctgg cggccgacca
 1501 acaccgggtgc gaggacgtgg atgactgcattt actggagccca agtccgtgtc cgcagcgctg
 1561 tgtcaacaca cagggtggc tgcgtgcac cttgttccctt aactacgacc tggtgacgg
 1621 cgagtgtgtt gaggccgtgg acccgtgtt cagagccaaatc tgcgtgttcc accgtgcagcc
 1681 cctgaaccaa actagtcattt ttcgtgttgc cggccggggc ttccggccca ttccacca
 1741 gccgcacagg tgccagatgtt tttcaacca gactgcctgtt ccagccgactt ggcaccccaa
 1801 caccgggttgcgatgtt gcccgttgcgatgtt ctacatcttgc gacgcacgggtt tcatotgcac
 1861 ggacatcgac gaggcggaaa acggcggctt ctgtccggg gtgtggcaca acctcccg
 1921 taccttcgag tgcatttcgcg ggcccgactt gggcccttgc cggccacattt gcaccgactt
 1981 tgactccggc aagggtggacg gtggcgacag cggctcttgc gaggcccccgc ccagccgac
 2041 gcccggctcc accttgcattt cttccgggtt ggggtctgttgc cttccgggtt tgcgtatagg
 2101 catctccatc ggcgcgttgcgtt ggcgttgcgtt ggcgttcttgc gcaactcg
 2161 caagaagcag ggccgcgcgc gggccaagat ggactacaag tgcggggccc ttccaaagga
 2221 ggttagtgcgtt cgcacgtgc ggaccggcgtt gacgcgcgtt agactctgaa cggcccttgc
 2281 ccaggagccg ggtccgttgc aggagctgttgc cttccatcacc cccagcttttgc taccggc
 2341 accttagtgcgtt gcatcgcgc tggagaagac cttcccgca ccccccacgg tttttcttgc
 2401 tattccatgg ctaactggcg aggggggtgtt tagagggagg agaatgagcc tcggccttgc
 2461 ccgtgacgtc actggaccac tggcaatgtt tggcaatttt gtaacgaaga cacagactgc
 2521 gatttgtccc aggttctcac taccggcgc aggaggtgttgc ggttatttttgc tggcagcc
 2581 tctggcaga ctttgacccgcgtt gtttttttttgc gatgactaaa atttttttttgc ttttttttgc
 2641 ttttagttttt ttttttttttgc ttttttttttgc acctgtatgtt cttccatgttgc cttccatgttgc
 2701 agcttcggc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 2761 tggtaatttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 2821 ttcttccttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 2881 ctttgaccccta ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 2941 agaaacaaaaa acactaaaaa taaaaatggc ctttttttttgc ttttttttttgc ttttttttttgc
 3001 atccctgaaat ttcagatccc cagacaaaaa taattttaaa caaagggttttgc ttttttttttgc
 3061 ggtattaaat ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 3121 tacttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 3181 ttgttgctaa ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 3241 ttgttgctaa ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc
 3301 agttcaagaa agcttcaaac ttttttttttgc ttttttttttgc ttttttttttgc ttttttttttgc

FIGURE 58A

3361 cttgtcactg gtagacccaaa ataaaaccag ctctactggc cttgtggaaat tgggagcttg
3421 ggaatggatc ctggaggatg cccaaattagg gcctagcctt aatcaggtcc tcagagaatt
3481 tctaccattt cagagaggcc ttttggaaatg tggccctgaa acaagaattt gaaagctgccc
3541 tgccccatggg agctgggttag aaatgcagaa tccttaggctc caccatccatcc agttcatgag
3601 aatcttatatt taacaagatc tgcagggggt gtgtctgctc agtaatttga ggacaaccat
3661 tccagactgc ttccaattttt ctggaaataca taaaaatatac atcagttata agtagcaggc
3721 caagtcaggc ccttattttc aagaaaactga ggaattttctt ttgtgttagct ttgctcttg
3781 gtagaaaaagg ctaggtacac agctctagac actgccacac agggctgtca aggtctttgg
3841 ttccagctaag ctaggaatga aatcctgctt cagtgtatgg aaataaatgt atcatagaaaa
3901 tgttaactttt gtaagacccaa ggttttcctc ttctatttt taaactcaaa atatttgtac
3961 atagtttattt atttatttggaa gataatctag aacacaggca aaatccttgc ttatgacatc
4021 acttgtacaa aataaacaaa taacaatgtg (SEQ ID NO:109)

FIGURE 58B

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Thrombomodulin (NM_000361)

MLGVVLGALALAGLGF PAPAE PQPGGSQCVEHDCFALYPGPAT
FLNASQICDGLRGHLMTVRSSVAADVISLLLNGDGGSQCVEHDCFALYPGPAT
GPLRGFQWVTDNNNTSYSRWARLDLNGAPLCPLCVAVSAAEATVPSEPIWEEQQCEV
KADGFLCEFHFATCRPLAVEPGAAAAAVSITYGTPFAARGADFQALPVGSSAAVAPL
GLQLMCTAPPGAVQGHWAREAPGAWDCSVENGCEHACNAIPGAPRCQCPAGAALQAD
GRSCTASATQSCNDLCEHFCVPNPDQPGSYSCMCETGYRLAADQHRCEDVDDCILEPS
PCPQRCVNTQGGFECHCYPNYDLVDGECEPVDPFRANCEYQCQPLNQTSYLCVCAE
GFAPIPHRCQMFCNQTACPADCDPNTQASCECPFGYILDDGFICTDIDECENG
CSGVCHNLPGTFECICGPDSALARHIGTDCDSGKVDGGDSGSGEPPSPTPGSTLTP
AVGLVHSGLLIGISIASLCLVVALLALLCHLRKKQGAARAKMEYKCAAPSKEVVLQHV
RTERTPQRL (SEQ ID NO:110)

FIGURE 58C

TF (NM_001993)

1 aagactgcga gctccccgca cccccctcgca ctccctctgg ccggcccagg gcgccttcag
61 cccaaacctcc ccagccccac gggcgccacg gaaccggcgtc gatctcgccg ccaactggta
121 gacatggaga cccctgcctg gccccgggtc ccgcgccccg agaccggcgt cgctcgacg
181 ctccctgctcg gctgggtctt cggccaggtg gccggcgctt caggcaactac aaatactgtg
241 gcagcatata atttaacttg gaaatcaact aatttcaaga caattttgga gtggaaacc
301 aaaccctgtca atcaagtcta cactgttcaa ataagcacta agtcaggaga ttggaaaagc
361 aaatgctttt acacaacaga cacagagtgt gacccacccg acgagattgt gaaggatgtg
421 aagcagacgt acttggcacg ggtcttc taccggcag ggaatgtgga gagcaccgt
481 tctgctgggg agcctctgta tgagaactcc ccagagttca caccttaccc ggagacaaac
541 ctcggacagc caacaattca gagtttggaa caggtggaa caaaagtgaa tgtgaccgt
601 gaagatgaac ggacttttagt cagaaggaaac aacactttcc taagcctccg ggatgtttt
661 ggcaggact taatttatac actttattat tgaaaatctt caagttcagg aaagaaaaaca
721 gccaacacaa acactaatga gtttttgatt gatgtggata aaggagaaaa ctactgttc
781 agtgttcaag cagtgattcc ctcccgaaca gttaaccggg agagtacaga cagcccggt
841 gagtgtatgg gccaggagaa aggggaattc agagaaatat tctacatcat tggagctgtg
901 gtagttgtgg tcatcatcct tgcacatc ctgcttatat ctctacacaa gtgttagaaag
961 gcaggagtgg ggcagagctg gaaggagaac tccccactga atgtttcata aaggaagcac
1021 tggggagact actgcaaatg ctatattgca ctgtgaccga gaactttaa gaggatagaa
1081 tacatggaaa cgcaaatgag tatttcggag catgaagacc ctggagttca aaaaactctt
1141 gatatgaccc gttattacca tttagcatct ggttttgaca tcagcattag tcactttgaa
1201 atgtaacgaa tggtactaca accaattcca agttaattt ttaacacca tggcacctt
1261 tgcacataac atgcttttaga ttatataattc cgcaacttaag gattaaccag gtcgtccaag
1321 caaaaacaaa tggggaaaatg tcttaaaaaa tcctgggtgg acttttggaa agctttttt
1381 tttttttttt tttgagacgg agtcttgc ttttgccag gctggagtgc agtagcacga
1441 tctcggtca cttgcaccct ccgtctctcg ggtcaagca attgtctgcc tcagcctccc
1501 gagtagctgg gattacaggt ggcactacc acgccaagct aatttttga ttttttagta
1561 gagatgggggt ttcaccatct tggccaggt ggtcttgaat tcctgaccc tgcgtccac
1621 ccacccctggc ctccccaaaga tgcttagtatt atggcggtga accaccatgc ccagccgaaa
1681 agtttttagg gggctgactt caatccatgt agggaaagtaa aatggaaagga aattgggtgc
1741 atttcttagga cttttctaac atatgtctat aatatagtgt ttaggttctt tttttttca
1801 ggaatacatt tggaaattca aaacaattgg gcaactttg tattaaatgtg ttaagtgcag
1861 gagacattgg tattctggc agcttccaa tatgttttac aatctgcact ttaactgact
1921 taagtggcat taaacatttg agagctaact atattttat aagactacta tacaactac
1981 agagttatg attaaggta cttaaagctt ctatgggtga cattgtatataaattttt
2041 caaaaagggtt ttctatatgg ggattttctt tttatgttagg taatattgtt ctatttgtat
2101 atatttgagat aatttattta atatacttta aataaagggtg actgggaatt gtt (SEQ ID

NO:111)

FIGURE 59A

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TF (NM_001993)

METPAWPRVPRPETAVARTLLLGVFAQVAGASGTTNTVAAYNL
TWKSTNFKTILEWEPKPVNQVYTVQISTKSGDWKSCKCFYTTDTECDLTDEIVKDVKQT
YLARVFSYPAGNVESTGSAGEPLYENSPEFTPYLETNLGQPTIQSFEQVGTKVNVTVE
DERTLVRRNNNTFLSLRDVFGKDLYTLYYWKSSSSGKKTAKTNTNEFLIDVDKGENYC
FSVQAVIPSRTVNRKSTDSPVECMQEKGEFREIFYIIGAVVFVVIILVIIILAISLHK
CRKAGVGQSWKENSPLNVS (SEQ ID NO:112)

FIGURE 59B

GPR4 (NM_005282)

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1 ctggtgacct tacttatctc tgttgttcc tgggtccta gaaaatgcca gcactcccac
61 ccacattgcc tgaactttcc aacactccct agctgcgcgtg tgtcctatct caacaattcc
121 tcatgttattt cttgtgtctt ctagaacatt cccccccat tattacttca atatggctac
181 acataacttcc taattgcctt gcaaaccatc tccttctcac cattgcccag cgatgtttc
241 gtctcctcca taaacactcc cgagagaccaaa ttttgtgtc acccccatac tccctcggtt
301 acacactgac tccatacata acctccttga aaaaccttt tattaatctc accatctcc
361 agactccct cctgtcataa ttccatccct cctccaactt ttccctctca agctctgccc
421 ttcccagccc agcccagcct acccaacetc atctcttccc ttagagaccac atcccacca
481 gttcccttga gcctccaagg aaggggctca gggggcccca tgccctcccg ctccctgtgg
541 cccccacagcc cccgtggggc aggggaagcg ccccaagaagc cgaagtgcgg accatggca
601 accacacgtg ggagggctgc cacgtggact cgccgcgttga ccacctctt ccgcacatccc
661 tctacatctt tgcacatcgcc gtggggctgc ccaccaactg cctggctctg tggggggcct
721 accggccaggta gcaacagcgc aacgagctgg gcgtctaccc gatgaacctc agcatcgccg
781 acctgctgtt catctgcacg ctgcgcgtgt ggggtggacta ctccctgcac caccgacaact
841 gatatccacgg ccccggttcc tgcaagctct ttgggttcat ctcttacacc aatatctaca
901 tcagcatcgc ttccctgtgc tgcatctcg tggaccgcta cctggctgtg gcccacccac
961 tccgccttcgc cccgcgtgcgc cggtcaaga cccgcgtggc cgtgagctcc tggtctggg
1021 ccacggagct gggcgccaa tcggcgcccc tggccatga ctagctttt cggagaccgt
1081 acaaccacac cttctgttta gagaagttcc ccatggaaagg ctgggtggcc tggatgaacc
1141 tctatcgggt ttgcgtgggc ttccctttcc cgtggcgct catgtctgtg tcttacccggg
1201 gcatcctgcg ggccgtgcgg ggcagcgtgt ccaccgagcg ccaggagaag gccaagatca
1261 agcggctggc cctcagccctc atcggccatcg tgctggctg ctttgcggcc tatcacgtgc
1321 tcttgcgtgtc cccgcagcgc atctacctgg gccgccttgc ggactgcggc ttggaggagc
1381 gcgcttttc tgcataccac agctcactgg ctttaccagg cctcaactgt gtggccgacc
1441 ccatcctcta ctgcctggc aacgagggcg cccgcagcga tggccaaag gcccgtcaca
1501 acctgctccg ctttctggcc agcgacaagc cccaggagat gccaatgcg tggctcacc
1561 tggagacccc actcacctcc aagaggaaca gcacagccaa agccatgact ggcagctggg
1621 cggccactcc gcccctccag ggggaccagg tgcaatggaa gatgtctggc ccagcacaat
1681 gaaccccgag tggcacagaa tcccccagtt tccctctca tcccacagtc ctttctctcc
1741 tggctgggt tatgcaattt gtatggaaaa agggctgtgt taatattcat aagaatacaa
1801 gaacttagga agagtggagt tgggtgtca ctggtcaacc ttgtgtctcc cagatccat
1861 cacagttgg cgattgtgaa gggccctctg aaggaggaga tggatataata tatttttttg
1921 gagacagggt ctcactgtgt tgcccaggct ggagtgcagt agtgcagtgc tggctcactg
1981 cagcctccac ctccctgggt ctccagcgtat cttccacat cagcctcccg agtagctggg
2041 accacaaaatg tgagccaccat catgcctggc taatttttgt actttttgtt taaatggagt
2101 ctcactatgt ttccccaggc tgatcttcaa ctccctggct caagagatcc tccctgcctt
2161 gcctccaaa gtgctcagat tagagatgtg agccgcctat tctggccaga taaattaagt
2221 caaacatttg gttccagaa aataaagaca aatagagaag gtttagatttt tttttttcca
2281 acaagtgat aaaagtctgt gactcggggg aaagtggaaag gagaatgca ggcgatata
2341 agtcattatg tttgcaaaac ccctggctcat acaggccagg gaaacataaga ccgcattct
2401 aagttcttag ataaacagcg atctccaagt caagactgag gatgaagagg gagaatgtca
2461 gaactcaagt gaaggcaat caggccagac tgcctggagg agtgcgttca gaagggttgg
2521 gaagaaggtg tgggacaaga agaaaggta ttatttattt cattcaacag aggttatgt
2581 agggcactgt gctgggtgg gctggggaca caacaatgac tgaggcagcc tggccttgc
2641 ttccacaggc tcaccataca caagtaataaaaatatgt aatgtttggg attgct (SEQ
ID NO:113)

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FIGURE 60A

P2000R1

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GPR4 (NM_005282)

MGNHTWEGCHVDSRVDHLFPPSLYIFVIGVGLPTNCLALWAAYR
QVQQRNELGVYLMNLSIADLLYICTLPLWVDYFLHHDNWIHGPGSCKLFGFIFYTNIY
ISIAFLCCISVDRYLAVAHLRFARLRRVKTAVAVSSVVWATELGANSAPLFHDELF
DRYNHTFCFEKFPMEGWVAWMNLYRVFVGFLFPWALMLLSYRGILRAVRGSVSTERQE
KAKIKRLALSIAIVLVCFAPYHVLLLRSAIYLGRPWDGFEEERVFSAYHSSLAF
LNCVADPILYCLVNEGARSDVAKALHNLLRFLASDKPQEMANASLTLETPLTSKRNST
AKAMTGSWAATPPSQGDQVQLKMLPPAQ (SEQ ID NO:114)

FIGURE 60B

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GPR66 (NM 006056)

1 agcgggggggt tccccggccgg acaggcgggg cgtcgaaaaaa cggggctgggg ccgctgtca
61 tcagttccact ggccccggcg ccgcgtctgt gtcgcgtcgct cggagggtgg aagccgggggt
121 ctcgcggggc gcggggccga tgactctct ctgcctcaat tgctctgtcc tccctggaga
181 cctgtaccca gggggtgcaa ggaacccccatt ggcattgcaat ggcaagtgggg ccagggggca
241 ctttgaccct gagggacttga acctgactga cgaggcactg agactcaagt acctggggcc
301 ccagcagaca gagctgtca tgcccatctg tgccacatac ctgctgatct tcgtgtgggg
361 cgctgtggc aatgggctga cctgtctggc catcctgcgc cacaaggcca tgcgcacgccc
421 taccaactac tacctcttca gcctggccgt gtcggacactg ctgggtctgc tgggtggcct
481 gccccctggag ctctatgaga tgtggcacaat ctaccccttc ctgctggcg ttgggtggctg
541 ctatttccgc acgctactgt ttgagatggg ctgcctggcc tcagtgctca acgtcaactgc
601 cctgagcgtg gaacgctatg tggccgtggc gcacccactc caggccagggt ccatggtgac
661 gcggggcccat gtgcggccgg tgcttggggc cgtctggggg ctggccatgc tctgctccct
721 gccccaaacacc agcctgcacg gcatccagca gtcgcacgtg ccctggccgg gcccagtggcc
781 agactcagct gtttgcattgc tggccggccc acggggccctc tacaacatgg tagtgcagac
841 caccgcgtg ctcttcttgc gcctgccccat gcccattatgc agcgtgtct acctgctcat
901 tgggctgca gtcgggggg agaggctgtc gtcattgcag gaggccaagg gcagggggcc
961 tgcagcagcc aggtccagat acacctgcag gtcggccagg cacatcgaaa gccggagac
1021 agtgaccaag atgctgtttg tcctgggtcgt ggtgtttggc atctgctggg ccccttcca
1081 cgccgaccgc gtcattgtggc gcgtcggtc acagtgac gatggccctgc acctggccct
1141 ccagcacgtg cacgtcatct cccggcatctt ctttctacactg ggctggcg ccaacccctg
1201 gctctatagc ctcatgtcca gccgttccg agagacccctc caggaggccc tggcctcg
1261 ggcctgtctgc catgcctca gaccccgcca cagctccac acgctcagca ggatgaccac
1321 aggccagcacc ctgtgtgtatg tgggctccct gggcagctgg gtccacccccc tggctggaa
1381 cgatggccca gaggcgccgg aagagacccga tcattctgtc gtggagccctt aaagtgggt
1441 cacctggagg ggccagaggg tcacctggag ctggggagac acatctgcct tcctctgcag
1501 gatcccttca cgtactgtcc cttagttcgc cttagaaattc tgaccagcac cttagttcc
1561 ctcagaggga aacacgaggaa ggagggttcc ctgactgtg aggactcaca ctgaccagac
1621 gccacacccctt gtgtttctta tctgtccact gccactcccc cagttcaaat octtaccctg
1681 cagaataatcc acagtttagct ggggctcagc agtctccct ctggggactc octgccacca
1741 ctgcagggtt ctgaaaacggg cccactgggt cctcaactgtc ctcccagggt octgttcagg
1801 tttctggcagg ggcccaggaa tccaggggac ctgggttccaa tctcagccct gctgtcacca
1861 ctttgtcatg caccatcaag catatcatgc taccttttttctt tttttctgtg acagagtetc
1921 actctgtcgc ccaggctaga gtgcagttggc gcgattttg ctcactgcaaa octccgcctc
1981 cgggggttcaa gcgattctcc tgcctcagcc tcccaggtt ctggggactac aggtgagccc
2041 cagcatgccc agctaatttt ttttaatttt tagtagagac ggggtttcac catgttgccc
2101 aggctgttctt caaaacttttgc acctcagggtt atccggccggc ctcggccctcc caaagtcttc
2161 ggattacagg catgagccac cacaccggc caatcagtc acctttcttag gccttgggtc
2221 cttgcctgaa aaatgaaaga ggcgttggtt ttccacagtg tcatgttttgcacttttagc
2281 tatggttttc tttctgtgtg tttgttgcactgttata ataaaaaccaa caataccctc
2341 agactgaaag ggcggaaagtt attatctgca tcttttatcaa ccccaagccc octtccctcc
2401 ctgacccccc catgcccctcc ccaggcttc ccagcacaag tggggcaaaag ccagcatgca
2461 agcagacccc accaccacag cccacccctcg tcctcacata cgtgcaggct ggctggggag
2521 tccagtgagc agacattttgc acttggctgg ccagagggtc tctgagggca agagacatgg
2581 ccaaccaagg gcaaggagtg accctgttgg ggggttctgccc gaactcaatg cagtgagaag
2641 agggacaggg acaagtagtc ctgtttactg agccccattc tgaatccctg caggccaagt
2701 cattgtctcag ccaggactca gttcatgggg gaaacttgac ctgctgactg ccctgagtt
2761 tggcctccctg agaggaagcc ctggcttcca aggctggggag ctggaggatg accttccgtc
2821 ggtctgtctg gttttctccct gcagacagtttgc tcttagctca tgcccatagc tcatgttccc
2881 tgccgagaaa gtggaggac gtttgcatttttgc ttagtggatgtttaaa aattcaatt
2941 ataaaaataaa taaatgtca tgatagaaaaa tttggaaatgtt gcaaaataagc aaaaatgaaa
3001 acaattttaa aatgtaaaaa cctcttgc cagggatgg gggaaaggca agtgaggagt
3061 tctttatgg gtgaagagtt tcagtttgc aaaatgaaaaa agttctggag atcagttgt
3121 caacaatatg aatatacata acaataactga actatacact gaaatggta agatggta
3181 tttttatgtt tttgttatttt accacaattt ttataaaaaag aggattaaat ctaaaggaaa
3241 gaaaaataaa aaaccaccca taactttact ctgaaggcgt aacagtggca tgggggggggg
3301 taaaaaaaaaaa aaaaaaaaaaa gaagaaaaaa aaataaagaa aaaaaaaaaaaa aaaa (SEQ ID

NO:115)

FIGURE 61A

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GPR66 (NM_006056)

MTPLCLNCSVLPGDLYPGGARNPMACNGSAARGHFDPEDLNLT
EALRLKYLGPQQTELFMPICATYLLIFVVGAVGNGLTCLVILRHKAMRTPTNYYLFS
AVSDLVLVLLVGLPLELYEMWHNYPFLLGVGGCYFRPLLFE
MVCLASVLTALSVERY
VAVVHPLQARSMVTRAHVRRVLGAVWGLAMLCSLPNTSLHG
IQQLHVPCRGPVPSAV
CMLVRP
RALYNMVVQTTALLFFCLPMAIMSVLYLLIGLRLRER
RLLL
MQEAKGRGSAA
ARSRYTCRLQQHDRGRRQVT
KMLFVLVVFGICWAPFHADRV
MWSVVSQWTDGLHLAF
QHVHVISG
IFFYLGSAANPVLYSLMSSRFRET
FQEALCLGACCHLRPRHSSHLSRM
TTGSTLCDVGS
LGSWVHPLAGNDGPEAQ
QETDPS (SEQ ID NO:116)

FIGURE 61B

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SLC22A2 (NM_003058)

1 ctttgaagtc agctggacca aggaaaaggcc ctggccctgaa ggctggtcac ttgcagaggt
61 aaactccccct ctttgacttc tggccagggg ttgtgcttag ctggctgcag ccgcctctcag
121 cctcgctccg ggcacgtcg gcaagctctgg gcctcttgcg ctgcagatc atgcccacca
181 ccgtggacgca tgcctctggag catggagggg agtttcaatt tttccagaag caaatgttt
241 tcctcttggc tctgctctcg gctacacctcg cgcccatctca cgtggccatc gtcttcttgg
301 gcttcacccc tgaccaccgc tgccggagcc cggagtgccg ctagctgagt ctgcgtcg
361 gctggagtc tgcagaggaa ctgaactaca cggtgccggg cccaggacct gcccggcaag
421 cctccccaaag acagtgtagg cgctacgagg tggactggaa ccagagcacc ttgcactgc
481 tggacccccc ggccagcctg gacacccaaca ggagccgcct gccactggc ccctgccggg
541 acggctgggt gtacgagacg cctggctcg ccattcgatc ctagtttaac ctggtatgt
601 ccaactcctg gatgttggac ctattccagt catcagtgaa tgtaggattc ttattggct
661 ctatgagttat cggctacata gcagacaggt ttggccgtaa gctctgcctc ctaactacag
721 tcctcataaaa tgctgcagct ggagttctca tggccatttc cccaacctat acgtggatgt
781 taattttcg cttaatccaa ggactggta gcaaagcagg ctggtaata ggctacatcc
841 tgattacaga atttggggg cggagatatc ggagaacagt ggggatttt taccaagtt
901 cctatacagt tgggtcctg gtctagctg gggggctta cgcaactcct cactggaggt
961 gggtgcagtt cacagttgct ctgcccact tcttcttctt gctctattac tggtgcatac
1021 ctgagtctcc cagggtggctg atctccaga ataagaatgc tgaagccatg agaattcatta
1081 agcacatcgc aaagaaaaat gggaaatctc taccggcctc cttcagcgc ctgagacttg
1141 aagaggaaac tggcaagaaa ttgaaccctt catttcttga cttggtcaga actcctcaga
1201 taaggaaaca tactatgata ttgatgtaca actggttcac gagctctgt ctctaccagg
1261 gcctcatcat gcacatggc cttgcaggtg acaatatctt cttggatttc ttctactctg
1321 ccctgggtga attcccaagct gccttcatga tcattctcac catcgaccgc atcggacgcc
1381 gtacccttg ggctgcatca aatatgggtt caggggcagc ctgtctggcc ttagtttt
1441 tacctggtga tctacaatgg cttaaaaattt ttatctcatg cttggaaaga atggggatca
1501 caatggccta tgagatagtc tgcctggta atgctgagct gtacccaca ttcattagga
1561 atcttggcgt ccacatctgt tcctcaatgt gtgacattgg tggcatcatc acgcattcc
1621 tggcttaccg gctcaactaac atctggctt agtcccgcg gatggtttc ggcgtgcctt
1681 gcttggtgc tggaggtctg gtgtgttgc ttccagaaac taaaggaaaa gcttgcctt
1741 agaccatcga ggaagccgaa aatatgc当地 gccaagaaaa aaataaagaa aagatgattt
1801 acctccaagt tcagaaaacta gacattccat tgaactaaga agagagaacg ttgtctgt
1861 catgacctag ctttgatggc agcaagacca aaagttagaaa tccctgcact catcacaaag
1921 cccatacaac tcaacccaaac ttaccctga gcccattcaa ctaggtcta cagccagtgg
1981 agtctattgt acactgtggaaaatccca tggaccaga tctgccttcaaa ttcttccagc
2041 tcactttatt ctcagcattc cttaggacatt ggacatttgtt tttctggagg gttttttt
2101 catcttgtt tttttttttttttaaa ttgtattttt ttcttgc当地 tgctatctaa ccagaataaca
2161 tagggaaact gtgggcttagg caaacaaaat agaaaaaaatgtt gtaaaagttgg
2221 gagaggagca tctatccct taaagaaaata aaacacccaa aacaatataa agttgtccag
2281 aatgtatgtc aagaatttttata gataggccctt tcagtaacac aggtgaagaa attttttaaa
2341 atacattgttattatcttag gtttagactta aagtgaatct caaataaaag aatcaggaat
2401 acaacttaag tgatcatgag gtccttccat atttagattt ggttaagcatg aatgtgtatt
2461 ttctacaaaaa gaccttgaga agagttcaat aaaaaatgtt agcattataa aa (SEQ ID
7)

NO:117)

FIGURE 62A

SLC22A2 (NM_003058)

MPTTVDDVLEHGGEFHFFQKQMFFLLALLSATFAPIYVGIVFLG
FTP DHRCRSPGVAE SLRCGW SPAEELNYT VPGPG PAGE AS PRQCRRYEV DWN QSTFD
CV DPLASL DTNR SRL PLG PCRD GWV YET PGSS IVTE FNLVCAN SWMLD LFQSS VN VGF
FIGSMSIG YIADRFGRKLCLLTTVLINAAGVLMAISPTYT WMLI FRLI QGLV SKAGW
LIGYI LITEFVG RRYR RTVGIFYQVAYTVG LLVLAGVAYALPHWRWLQFTVALPNFFF
LLYYWCIPESPRWLISQN KNAEAMRIIKHIAKNGKSLPASLQR LRLEEE GTKKLNPS
FLDLVRTPQIRKHTMILMYNWF TSSVLYQGLIMHMGLAGDN IYLDFFY SALVEFP AAF
MIILTIDRIGRRYPWAASN MVAGAACLASVFIPGDLQWLKIIISCLGRMGITMAYEIV
CLVNAELYPTFIRNLGVHICSSMCDIGGIITPFLVYRLTNIWLELPLMVFGVLGLVAG
GLVLLL PETKGKAL PETIEEAENMQRPRKNKEKMIYLQVQKLDIPLN (SEQ ID NO: 118)

FIGURE 62B

110/115
NLSN1 (NM_002420)

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1 gcccggcca aggaggaggc taaaaagagcc tgagctgtgc cctctccatt ccactgctgt
61 ggcagggtca gaaatcttgg atagagaaaaa cctttgcaa acgggaatgt atcttgtaa
121 ttccttagcac gaaagactct aacagggttt gctgtggca gttcaccaac cagcatatcc
181 cccctctgcc aagtgcaca cccagaaaaa atgaagagga aaacaaaacag gtggagactc
241 agcctgagaa atggctgtt gccaaagcaca cccagagcta cccaacagat tcctatggag
301 ttcttgaatt ccagggtggc ggtatattcca ataaaagccat gtatatccgt gtatctatg
361 acaccaagcc agactcaactg ctccatctca tggtaaaga ttggcagctg gaactcccc
421 agctcttaat atctgtgcata ggaggcctcc agaacttga gatgcagccc aagctgaaac
481 aagtcttgg gaaaggccctg atcaaggctg ctatgaccac cggggcctgg atcttcaccg
541 ggggtgtcag cacagggttt atcagccacg taggggatgc cttgaaaagac cactctcca
601 agtccagagg ccgggtttgt gctataggaa ttgctccatg gggcatcgtg gagaataagg
661 aagacctgtt tggaaaggat gtaacaagag tgtaccagac catgtccaaac cctctaaagta
721 agctctctgt gctcaacaac tcccacaccc acttcattctt ggctgacaat ggcacccctgg
781 gcaagtatgg cgccgaggtt aagotgcgaa ggctgttggaa aagcacatc tccctccaga
841 agatcaacac aagactgggg cagggcgtgc ccctcggtt tctcggttgg gaggggggcc
901 ctaacgtgtt gtccatcgta ttggaaatacc tgcaagaaga gcctccatc cctgtgttga
961 tttgtatgg cagcggacgt gcctcggaca tcctgttccctt tgccgacaaag tactgtgaag
1021 aaggcgaat aataaatgag tccctcaggg agcagcttctt agttaccatt cagaaaaacat
1081 ttaattataa taaggcaca tcacatcgc tggtaaat tataatggag tgcataaga
1141 agaaaagaact cgtcaactgtt ttcagaatgg gttctgaggg ccagcaggac atcgagatgg
1201 caatttaaac tgccctgtc aaaggaaacaa acgtatctgc tccagatcag ctgagcttgg
1261 cactggctt gAACCGCGTG gacatagcac gaagccagat cttgttggg gggccccact
1321 ggcccccctt gggaaaggctg gcaccccccga cggacagcaa agccacggag aaggagaaga
1381 agccacccat ggccaccacc aaggaggaa gaggaaaagg gaaaggcaag aagaaaggaa
1441 aagtaaaaga ggaagtggag gaagaaactg acccccccggaa gatagagctg ctgaacttgg
1501 tgaatgtttt ggagcaagcg atgtagatgt ctttagtctt agatcggtc gacttggta
1561 agctcctgat tggaaaacggg gtgaacatgc aacactttctt gaccattccg aggctggagg
1621 agcttataa cacaagactg ggtccaccaa acacacttca tctggttggg aggatgttga
1681 aaaagagcaa cttccgcctt gattaccaca tcagcctcat agacatcgaa ctcgtgttgg
1741 agtacccat gggaggagcc taccgtgtc actacactcg gaaaaactt cggacccctt
1801 acaacaactt gtttggacca aagaggccta aagctttaa acttctggg atggaaagatg
1861 atgaggctcc agctaaggg aaaaaaaaaa aaaaaaaaaa aaaggaggaa gagatcgaca
1921 ttgatgttggc cgaccctgtc gtgagtcgtt tccagtatcc cttccacgag ctgatgttgg
1981 gggcagtgtt gatgaaaacgc cagaaaaatgg cagtgttccctt ctggcagcga ggggaagaga
2041 gcatggccaa ggcccgggtt gcctgtcaagc tctacaaggc catggcccac gaggctccg
2101 agagtatctt ggtggatgac atctccagg acttggataa caattccaaa gacttcggcc
2161 agcttgcctt ggagttatta gaccaggctt ataagcatga cgagcagatc gctatgaaac
2221 tcctgaccta cgagctgaaa aactggagca actcgacccgc cctcaaactg gccgtggcag
2281 ccaaacaccg ggacttcattt gtcacacccgc gcagccagat gctgtgtcacc gatatgttgg
2341 tggaaagact ggccgtgcgg aagaaccccg gcctgaaggt tatcatgggg attctctac
2401 ccccccacccat ttgttttttgc gatttcgcata catatgtatc ttctcgatc caaacatcca
2461 aggaaaaacgaa ggtatggcaaa gaaaaagaag aggaaaaatac ggtatgc当地 gcatatgtctg
2521 gctcaagaaa gggggatgag gagaacgcgca ataaaaaaaaca gagaagtattt cccatcgaa
2581 caaagatctg tgaattctat aacgcgccttca ttgtcaagtt ctgggttac acaatatcat
2641 acttgggctt ctcgtgtcgtt ttaactacg tcatttcgtt gggatggat ggctggccgt
2701 ccctccagga gtggatgtc atctccata tcgtgagcctt ggcgttagag aagatacgag
2761 agatccat gtcagaacca ggcaactca gccagaaaaat caaagtttgg ctccaggagt
2821 actggaaacat cacagatctc gtggccattt ccacattcat gattggagca attcttcgccc
2881 tacagaacca gcccatacg ggctatggcc gggatgtcta ctgtgttggat atcatcttct
2941 ggtacatccg tgcgtgttggc atctttgggt tcaacaagta tctggggcca tacgtatgtt
3001 tgattggaaa gatgatgatc gacatgtgtt actttgttgg catcatgtc gtcgtgtca
3061 tgagtttgcgg agtagccctg caagccattt tgcattccaga ggagaagccc tcttgaaac
3121 tggccgaaa catcttctac atgcctactt ggtatgtcta tggagaggtt tttgcagacc
3181 agatagaccc ctacgcccattt gaaattatc ctccctgttgg tgagaaccta tatgtatgagg
3241 agggcaagcg gtttccccc tgcgtatcccg ggcgtgttgc cactccagca ctcatggcgt
3301 gctatctactt ggtcgccaaatc atcctgttgg tgaacctgtt gattgtgtt ttcaacaata

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FIGURE 63A

3361 ccttcatttga agtaaaaatca atatccaacc aggtgtggaa gttccagcga tatcagctga
 3421 ttatgacatt tcatgacagg ccagtcctgc ccccaccat gatcatttta agccacatct
 3481 acatcatcat tatgcgtctc agcggccgct gcaggaaaaaa gagagaaggg gaccaagagg
 3541 aacgggatcg tggattgaag ctcttcctta gcgacgagga gctaaagagg ctgcataatg
 3601 tcgaggagca gtgcgtgcag gagcacttcc gggagaagga ggtatgagcag cagtctcca
 3661 gcgacgagcg catccgggtc acttctgaaa gagttgaaaaa tatgtcaatg aggttggaaag
 3721 aaatcaatga aagagaaaact tttatgaaaaa cttccctgca gactgttgac ctgcacttg
 3781 ctcagctaga aagaattatct aacagaatgg tgaatgtct taaaaatctt gcggaaatcg
 3841 acaggcttgc aactgtccag gcacggtccc gggcttcttc tgaatgtgag gcaacgtatc
 3901 ttctccggca aagcagcattc aatagcgtc atggctacag ctgttatcga tatttttta
 3961 acggagaaga gtttattttt gaggatacat ctctccac gtcaccagg acaggagtca
 4021 ggaaaaaaac ctgttccttc cgtataaagg aagagaagga cgtaaaaacg cacctagtcc
 4081 cagaatgtca gaacagtctt cacccttccat tgggcacaag cacatcagca accccagatg
 4141 gcagtcaccc tgcagtagat gacttaaga acgctgaaga gtcggatattt ggtccagata
 4201 ttgggatttc aaggaagat gatgaaagac agacagactc taaaaaagaa gaaactattt
 4261 ccccaagttt aaataaaaaca gatgtgatac atggcacagga caaatcagat gttcaaaaca
 4321 ctcagctaac agtggaaaacg acaaataatag aaggcactat ttcttatccc ctggaaagaaa
 4381 cccaaattac acgcttatttc cccgatgaaa cgatcaatgc ttgtaaaaca atgaatcca
 4441 gaagcttcgt ctattcccg ggaagaaagc tggtcggg ggttaccag gatgttagatg
 4501 acagttcaat cacggaccag caattgacga cggaaatggca atgccaagttt caaaagatca
 4561 cgcgcctctca tagcacagat attcattaca ttgtgtcgga agtgcagtg caagctgagc
 4621 ataaagagca gtttgcagat atgcaagatg aacaccatgt cgctgaagca attcctcgaa
 4681 tccctcgctt gtccttaacc attactgaca gaaatggat gggaaactta ctgtctgtga
 4741 agccagatca aactttgggaa ttccatctc tcaggtcaaa aagtttacat ggacatccta
 4801 ggaatgtgaa atccattcag ggaagttt acagatctgg acatgccatg agtgttaagca
 4861 gcttagtaat tttttttttt atgacagcag aaaaaaaaaa ggtttaagaaa gagaaagctt
 4921 ccacagaaac tgaatgtctg tctttttttt ttcttttaatt ttttttttta acagtcagaa
 4981 ccactaatgg gtgtcatctt ggcattctaa acatcatcaa tttctaaaaaa cattttccct
 5041 taaaaaattt tggaaattca gacttgattt acaattttat gcaactaaaag tagtattttg
 5101 ttagcatatg ttagtaggt tagtttttc agttgcagta gtatcaaattt aaagtgtatga
 5161 tactgttaacg aagataaatt ggctaatcag tatacaagat tatacaatct cttttattact
 5221 gagggccacc aaatagccctt ggaagtgcctt tcgagcactg aagtccat taggtcactt
 5281 aagaagtaag caactagctg ggcacagtgg ctcattgcctt taatccttagc actttggag
 5341 gccaaaggcag aaagatagct tgagtccagg agtttgagac cagcctggc aacatagtga
 5401 taccatctt cttttttttt aaaaaaaaaa a (SEQ ID NO:119)

FIGURE 63B

NLSN1 (NM_002420)

MYIRVSYDTKPDSSLHLMVKDWQLELPKLLISVHGGLQNFMQP
KLKVFGKGLIKAAMTTGAWIFTGGVSTGVISHVGDAKDHSSKSRGRVCAIGIAPWG
IVENKEDLVLGKDVTTRVYQTMSNPLSKLSVLNNSHTHFILADNGTLGKYGAEVKLRLL
EKHISLQKINTRLGQGVPLVGLVVEGGPNVVSIVLEYLQEEPPIPVVICDGSGRASDI
LSFAHKYCEEGGIINESLREQLLVTIQKTFNYNKAQSHQLFAIIMECMKKELVTVFR
MGSEGQQDIEMAILTALLKGTVNSAPDQLSLALAWNVDIARSQIFVFGPHWPPLGSL
APPTDSKATEKEKKPPMATTKGGRGKGKGKKKGKVKEEVEETDPRKIELLNWVNALE
QAMLDALVLDRVDFVKLLIENGVNMQHFLTIPRLEELYNTRLGPPNTLHLLVRDVKKS
NLPPDYHISLIDIGLVLEYLMGGAYRCNYTRKNFRTELNYNNLFGPKRPKALKLLGMEDD
EPPAKGKKKKKKKEEEIDIDVDDPAVSRFQYPFHelmvavlmkrqkmaFLWQRGE
ESMAKALVACKLYKAMAHESESSDLVDDISQDLDNNSKDFGQLALELLDQSYKHDEQI
AMKLLTYELKNWSNSTCLKLAVAALKHRDFIAHTCSQMLLTDMWMGRRLMRKNPGLKVI
MGILLPPTILFLEFRYYDDFSYQTSKENEDGKEKEEENTDANADAGSRKGDEENEHKK
QRSIPIGTKICEFYNAPIVKFWFTISYLGYLLLNFNYVILVRMDGWPSSLQEWINVISYI
VSLALEKIREILMSEPGKLSQKIKVWLQEYWNITDLVAISTFMIGAILRLQNQPYMGY
GRVIYCVDIIIFWYIRVLDIFGVNKYLGPYVMMIGKMMIDMLYFVVIMLVVLMMSFGVAR
QAILHPEEKPSWKLARNIFYMPYWMYGEVFADQIDLYAMEINPPCGENLYDEEGKRL
PPCIPGAWLTPALMACYLLVANILLVNLLIAVFNNNTFFEVKSISNQVWKFQRYQLIMT
FHDRPVLPMMIILSHIYIIIMRLSGRCRKREGDQEERDRGLKLFLSDEELKRLHEF
EEQCVQEHFREKEDEQQSSDERIRVTSERVENMSMRLEEINERETFMKTSLQTVDLR
LAQLEELSNRMVNALENLAGIDRSIDLQARSRASSECEATYLLRQSSINSADGYSLYR
YHFNGEELLFEDTSLSPTGTGVRKKTCSFRIKEEKDVKTHLVPECQNSLHLSLGTST
SATPDGSHLAVDDLKNAEESKLGPDIGISKEDDERQTDSKKEETISPSSLNKTVDIHGQ
DKSDVQNTQLTVETTNIEGTISYPLEETKITRYFPDETINACKTMKSRSFVYSGRKL
VGGVNQDVYSSITDQQLTTEWQCQVQKITRSHSTDIPYIVSEA VQAEHKEQFADMQ
DEHHVAEAIPRIPRLSLTITDRNGMENLLSVKPDQTLGFPSLRSKSLHGHPRNVKSIQ
GKLDRSGHASSVSSLVIVSGMTAEEKVKKEKASTETEC (SEQ ID NO:120)

FIGURE 63C

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ATN2 (Na/K transport, NM_000702)

1 tctctgtctg ccagggtctc cgactgtccc agacgggctg gtgtgggctt gggatccctcc
 61 tggtgacctc tccccctaag gtcacctcaga cactctgccc caagatggc cgtggggctg
 121 gccgtgagta ctcacccgtcc gccaccacgg cagagaatgg gggcggcaag aagaaacaga
 181 aggagaagga actggatgag ctgaagaagg aggtggcaat ggatgaccac aagctgtcct
 241 tggatgagct gggccgcaaa taccagaatgg acctgtccaa ggcctcacc aaccagcggg
 301 ctcaggacgt tctggctcg gatggggcca acgcctcac accacccccc acaaccctg
 361 agtgggtcaa gttctggcg cagctttcg gggggcttc catctgtctg tggattgggg
 421 ctatcctctg cttcctggcc tacggcatcc aggctgccat ggaggatgaa ccatccaacg
 481 acaatctata tctgggtgtg gtgtggcag ctgtggcat tgtaactggc tgcttctcct
 541 actaccagga ggcacaaagagc tccaaagatca tggattccctt caagaacatg gtacccctc
 601 aagcccttgt gatccgggag ggagagaaga tgcagatcaa cgcacaggaaa gtgggtgtgg
 661 gagacctggt ggaggtgaag ggtggagacc gcgtccctgc tgacccctgg atcatctt
 721 ctcatggctg taaggtggat aactcatctt taacaggaga gtcggagccc cagaccgg
 781 ccccccgggtt caccatcg aacccctgg agacccgcaa tatctgtttc ttctccacca
 841 actgtgttga aggacactgcc agggcattt tgattgccac aggagaccgg acgggtatgg
 901 gccgcatacg tactctcgcc tcaggcctgg aggttggcgg gacacccata gcaatggaga
 961 ttgaacactt catccagctg atcacagggg tgcgtgtatt cctgggggtc tcccttc
 1021 tgctctccct catcctggc tacagctggc tggaggcagt catcttc tccatccatca
 1081 tagtgccaa cgtgcctgag gggcttctgg ccactgtcac tgcgtgcctg accctgcacag
 1141 ccaagcgcattt ggcacccggaa aactgcctgg tgaagaacccctt ggaggcgggtg gagacgcgtgg
 1201 gctccacgtc caccatctgc tcggacaaga cgggcacccctt caccacaaac cgcacccatcc
 1261 tcgcccacat gtgggttcgac aacccaaatcc atgaggctga caccacccgaa gatcagtctg
 1321 gggccacttt tgacaaaacga tccctctacgt ggacggccctt gtcgtcaattt gtcgtctct
 1381 gcaaccgcgc cgtcttcaag gcaggacagg agaacatctc cgtgtctaag cgggacacac
 1441 ctggtgatgc ctctgagtc gctctgtca agtgcatttga gtcgtctgtt ggcctc
 1501 gaaaaatgag agacagaaaac cccaaagggtgg cagagattcc ttcaactctt accaacaagg
 1561 accagctgtc tatccacccgag cgagaagaca gccccccagag ccacgtgcgtg gtgtatgaaagg
 1621 gggccccaga ggcattctg gaccgggtgtt ccaccatctt ggtgcagggg aaggagatcc
 1681 cgctcgacaa ggagatgcaaa gatgcctttc aaaatgccta catggagctg gggggactt
 1741 gggagcgtgt gctgggatc tgcacttgc atctgcattc tggaaaggtt ctcggggct
 1801 tcaaatttgcg cacggatgag ctgaactttc ccacggagaa gctttgtttt gtggggctca
 1861 tgtctatgt tgaccctccc cgggctgtgt tgccagatgc tgcggcaag tgccgaagcg
 1921 caggcatcaa ggtgtatcatg gtaaccgggg atcaccctat cacagccaa gccatgcca
 1981 aaggcgtggg catcatatca gaggttaacg agactgttga ggacatttgc gcccggctca
 2041 acattccat ggtcaagtcc aacccccagag aagccaaggc atgcgtgggt cacggctctg
 2101 acctgaagga catgacatcg gagcagctcg atgagatctt caagaaccac acagagatcg
 2161 tctttgtctg aacgtctccc cagcagaacg tcatcatttgc gggggatgtt cagggcagg
 2221 gagccattgt ggccgtgacg ggtgacgggg tgaacgactc ccctgcattt aagaaggctg
 2281 acattggcat tgccatgggc atctctggct ctgacgtctc taaggcggca gcccacatga
 2341 tcctgtgtt gacaaactt gcctccatcg tcacgggggtt ggaggaggcc cgcctgtatct
 2401 ttgacaactt gaagaaatcc atcgcttaca ccctgaccag caacatcccc gagatcaccc
 2461 cttctctgtt gttcatcatt gccaacatcc ccctacccctt gggcactgtg accatccctt
 2521 gcattgaccc tggccacatg atggccctgtt ccatttc tgccttatgag gcaagctgaga
 2581 gtgatcatgat gaagcggcag ccacaaactt cccagacggc caagctgggtt aatgagaggc
 2641 tcattcagcat ggcctacgaa cagatcggtt tgatccaggc actgggtggc ttcttc
 2701 actttgtgtt cctggcagag aacgtttcc tgccatcactg gctactgggaa atccggctcg
 2761 actggatgaa ccggaccatg aatgatctgg aggacagcta tggacaggag tggactatg
 2821 agcagcggaa ggtgtgtggag ttacgtgtcc acacggcattt ctttgcggc acgtgtgtgg
 2881 tgcagtggtt gacactcatc atctgtcaaga cccggccgcaaa ctcagtc tccatcc
 2941 tgaagaacaa gatcctgatt tttgggctcc tggaggagac ggcgttggctt gctttctct
 3001 cttactgccc aggcatgggtt gtagccctcc gcatgtaccc gctcaaagtc acctgtgtgg
 3061 tctgcgcctt cccctacagc ctccatctt tcatctatga tgaggtccga aagctcatcc
 3121 tgcggcggta tcctgggtggc tgggtggaga aggacatca tctactgaccc cattgaaaga
 3181 agaaccaggc atggaaagat ggggagctt ggaggtgtt ggggatggat gatggagagg
 3241 gatggaaata acgggtggca ttgggtggca acatttgggg agagataatg aggcaactca

FIGURE 64A

3301 gcaggctaag ttgcgggta tataaattgg ggtgatgacc ccatagaccc aactgtgaac
 3361 aatcagatta gacactatgt gtttagtgc ccccgaccag atccctttcc atcccactcc
 3421 actatgttgt ctatTTTtc tgaggaatta agggttaccc caccctgcc actcccatcc
 3481 cttcaacccc acttcctact gtaatagatc agcatccaaa agcaggAACc catctaaacc
 3541 agaaggAACc cctctcagat caccCCAGCC tcactccatt tcccacttcc acccccgtta
 3601 gcttcctgca ggactctate cctggcttcc cttcagacc ttgcaatcac aaaaggTTCT
 3661 tctggtgagt gcaagagcct gagactggaa aagggtggact tgcctcccaag tcgaggctgg
 3721 taaggacct tcagggagag ctggcagac aggtgggaga tggaggtagg gctggctgga
 3781 ggaaggAAAC aacaaaggaa gtgaggtgt gccaatgaca ggacatttga catgagtctc
 3841 cagatagatg tcgtggactc cagctctacg tcccacattt tagaatacc caccaggcaga
 3901 acaaactcag atctcatcag ggtacgcaga gaggcaggac cagaaggccaa tcaagagctt
 3961 ccagaaatgc cacacttgc tgccacagag ttccccgctg acccttgggtt aggggtcctc
 4021 ttagtccaca aggtccggat gtcactcatg tacttaataa cacttcaccc tctgtataac
 4081 taagtccatc gagctccatg ctgtctgaa agggatggcc acaagttctt tcccagcctc
 4141 ttccattccc ttcttttca tgcccatccc gatgaacctg catcattccc cgacactgccc
 4201 aagccaaaccc tggaaaagga gttcgtggc cattggctag aatcagggtg gagaagttcc
 4261 ctgaaccttc ctgtctccca gggacatgta tgcttccagg gacaagctt ggtcatgaac
 4321 atggtcagaa ctttggaca agaggaaaa tactaagaga ttgtctttt ctgggtgcgg
 4381 tggctcatgc ctgtaatccc agcaacttgg gaggccgagg caggtggatc atgaggtcag
 4441 gagttcgagg cgagcctggc caacatggtg aaaccctgtc tctactaaaa gtacaaaaaaa
 4501 ttagccagtc atggtggcac acgcctgtaa tctcagctac tcaggaggct gaggcaggag
 4561 aattgttga acctgtgagg aagaggTTGc agtgagctga gatcgtgcca ttacactcca
 4621 gcctggcga aagggtgaga ctccatctca aaaaaaaaaaa aatgatttgc ttgggtacgt
 4681 cttaggtggc agggctgttc cttccaggca aatgcccttc aaaccgacga tcattgtgcc
 4741 cacttaccct gggctggaga gttggTTCA ggttcctaca ggagatagct ttctttccct
 4801 tactccctat ctaacacttt tgctctgcag gcagccttgc ccattctcta agcctggctt
 4861 agaaggcact gggaaatgtcc tgtagagaga gacctagata ggtcatgca gtgagaaaga
 4921 catctgagga aaatggaaaga cctaaggcag acaggaagga agcacaAAAAG acaagcattg
 4981 ggtcagaccc ataaaccacc tcccaaaggc tgcatttca ttgcactgga attttgtttt
 5041 atcagaagca aggaagtaag ggagtcatgg cttgggcct gggaaatctaa gtgggagaca
 5101 atattaattt gatccgatt aattggagat tactaactgt ggacaaaagt ttatctttgc
 5161 acaatcaata aaaatggcat ttttttagta attaagagc ataaacaata ttgctagagg
 5221 tggcatgttt agtctaccaa aaacaataact ttgcaggcac tttagaaata tccttttaga
 5281 agcagcgagt gcatgggcta attatcatca atctttatgt attgttaaa gaaacatcta
 5341 caggatctt attggtgacc ttttgaaga cattagttt aggtactacc tatctacttg
 5401 aaaataataa agtggcattt ctatgtaaa aaaaaagaaaa tctctccat aattcagatt
 5461 tctacacttt atacttgctt ccctccaaa tcgtgatatt gaaatatggt g (SEQ ID

NO:121)

FIGURE 64B

ATN2 (Na/K transport, NM_000702)

MGRGAGREYSPAATTAENGGGKKQKEKELDELKKEVAMDDHKL
SLDELGRKYQVDLSKGLTNQRAQDVLARDGPNALTPPPTTPEWVKFCRQLFGGFISILL
WIGAILCFLAYGIQAAMEDEPSNDNLYLGVVLAAVVIVTGCFSYYQEAKSSKIMDSFK
NMVPQQALVIREGEKMQINAEEVVVGDLVEVKGGDRVPADLRISSHGCKVDNSSLTG
ESEPQTRSPEFTHENPLETRNICFFSTNCVEGTARGIVIATGDRTVMGRIATLASGLE
VGRTPIAIMEIEHFIQLITGVAVFLGVFFFVSLILGYSWLEAVIFLIGIIVANVPEGL
LATVTVCCLTLTAKRMARKNCLVKNLEAVETLGSTSTICSDKTGTLTQNRMTVAHMWFD
NQIHEADTTEDQSGATFDKRSPWTALSRIAGLCNRAVFKAQGENISVSKRDTAGDAS
ESALLKCIELSCGSVRKMRDRNPKVAEIPFNSTNKYQLSIHEREDSPQSHVLVMKGAP
ERILDRCSTILVQGKEIPLDKEMQDAFQNAYMELGGGLGERVLGFCQLNLPSGKFPRGF
KFDTDELFNPTEKLCFVGLMSIDPPRAAVPDAVGKCRSAGIKVIMVTGDHPITAKAI
AKGVGIISSEGNETVEDIAARLNIPMSQVNPREAKACVVHGSDLKDMTSEQLDEILKNH
TEIVFARTSPQQKLIIVEGCQRQGAIVAVTGDGVNDSPALKKADIGIAMGISGSDVSK
QAADMILLDDNFASIVTGVEEGRLIFDNLKKSIAYT LTSNIPEITPFLFIIANIPLP
LGTVTILCIDLGTDMVPAISLAYEAAESDIMKRQPRNSQTDKLVNERLISMAYGQIGM
IQALGGFFTYFVILAENGFLPSRLLGIRLDWDDRTMNDLEDSYGQEWTYEQRKVVEFT
CHTAFFASI VVVQWADLIICKTRRNSVFQQGMKNKILIFGLLEETALAFLSYCPGMG
VALRMYPLKVTWWFCAFPYSLIIFYDEVRKLI LRRYPGGWVEKETY (SEQ ID NO:122)

FIGURE 64C